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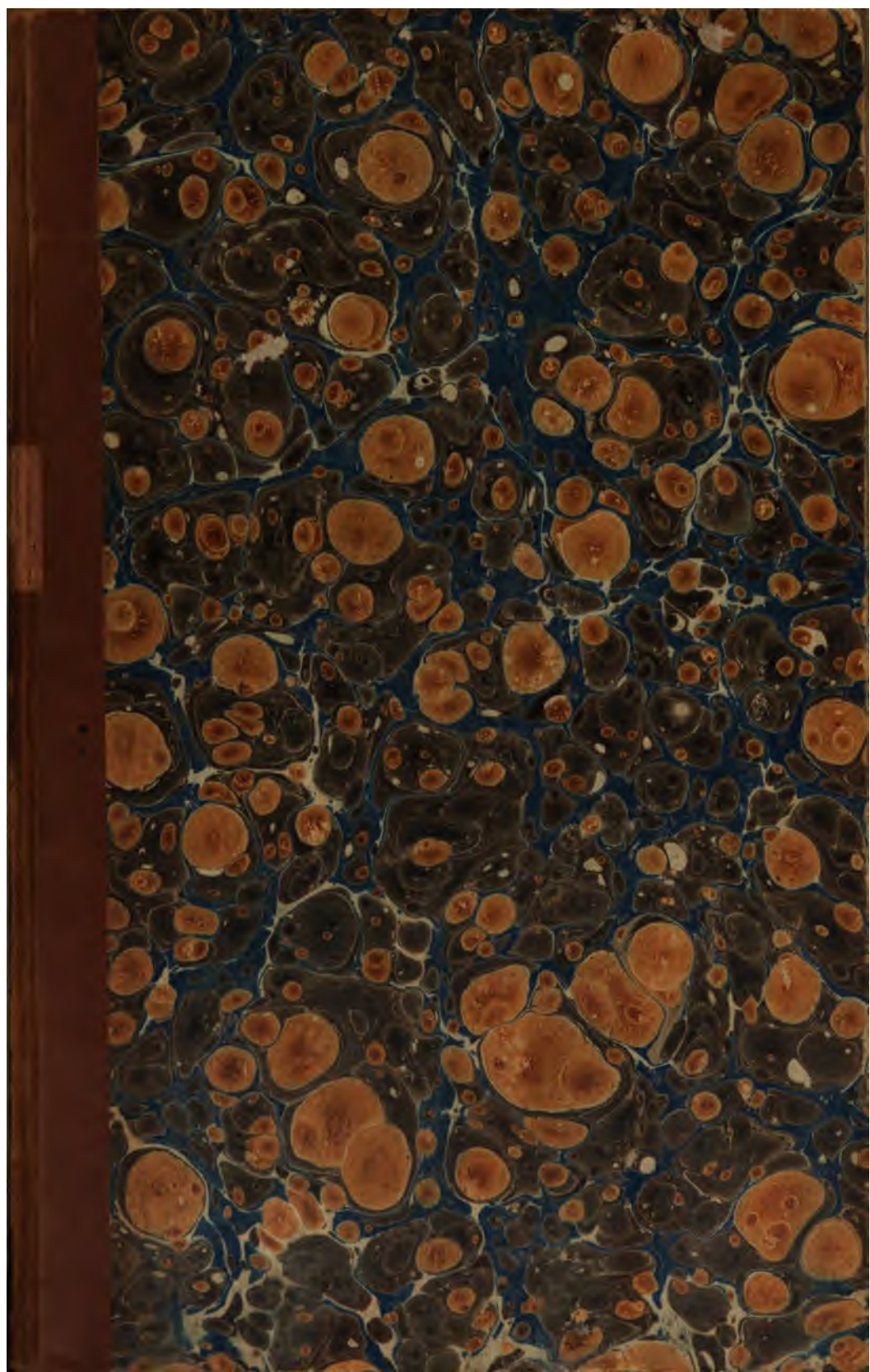
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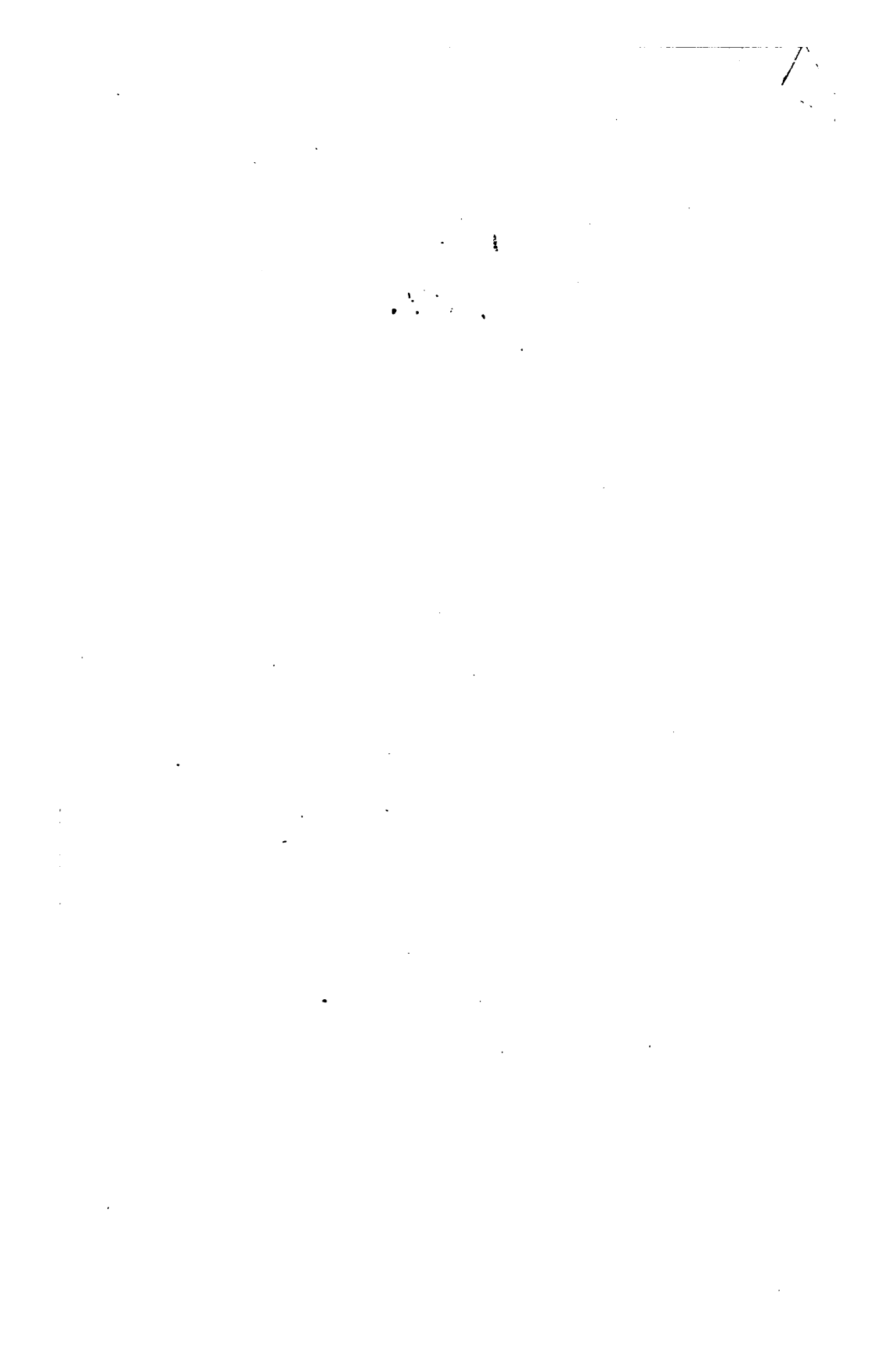


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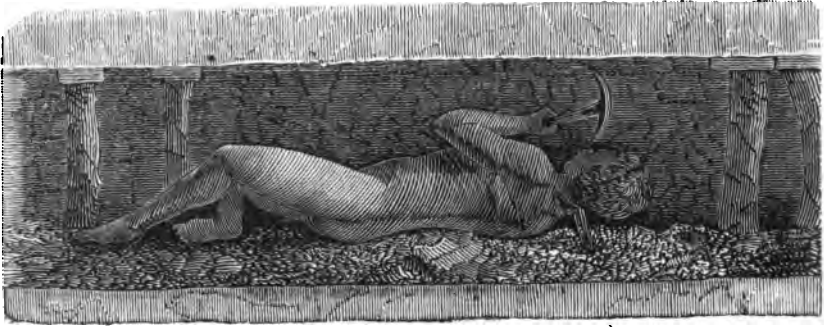
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COLLIERS PICKING THE COAL.

THE
CONDITION AND TREATMENT
OF
THE CHILDREN
EMPLOYED IN THE
MINES AND COLLIERIES
OF
THE UNITED KINGDOM.

CAREFULLY COMPILED FROM THE APPENDIX TO THE FIRST REPORT OF THE
COMMISSIONERS APPOINTED TO INQUIRE INTO THIS SUBJECT.

WITH
COPIOUS EXTRACTS FROM THE EVIDENCE,

AND
Illustrative Engravings.

W. G.

LONDON:
WILLIAM STRANGE, 21, PATERNOSTER ROW,
AND ALL BOOKSELLERS.
1842.

891.



P R E F A C E.

THE intent of the following pages is to give such a condensed, but complete, description of the labour and sufferings of the children employed in the mines of the United Kingdom, as may enable those who have neither time nor inclination to wade through the two thousand pages comprising the First Report, with the Evidence on which it rests, of the Commissioners appointed by the Queen to inquire into the employment and condition of those children, to form some just conception of the necessity which exists for legislative deliberation and interference on their behalf.

To the enlightened, zealous, and persevering efforts of LORD ASHLEY, the public is indebted for the appointment of the Commission from whom this Report emanates; and although the facts it has brought to light relative to the sufferings and degradation, physical and moral, of large numbers of young children, of both sexes, can scarcely fail to augment the painful sympathy previously excited in his Lordship's mind, in behalf of a class for whom "no man cared," it cannot be doubted that his humane and patriotic exertions in their cause will be now crowned with the "consummation so devoutly to be wished." His Lordship was one of the first who entered the vineyard; he has "borne the burden and heat of the day;" but, having accomplished so much, "more labourers will now enter in," and the abominations existing in the mining districts of the country will be put down, as infringements upon all those high and solemn obligations that rest upon a civilized and a Christian country.

W. C.

May 13th, 1842.

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EMPLOYMENT IN COAL MINES,

&c.

INTRODUCTORY CHAPTER.

THERE is an old adage, that “one half of the world knows not how the other half lives;” and we much doubt whether it has ever received so striking an exemplification as in the publication of “The Appendix to the First Report of the Commissioners appointed by her Majesty to inquire into the Condition of the Children employed in the Mines and Factories of the United Kingdom.”

The Appendix relating to the mines, alone, comprises upwards of 1800 folio pages, and supplies a mass of the most valuable information touching the physical and moral condition of the large numbers of children, male and female, who are employed in the wide field of mineral industry.

The objects of the inquiry entrusted to the commission, consisting of Mr. Thomas Tooke, Dr. Southwood Smith, Mr. Leonard Horner, and Mr. Robert Saunders, assisted by their Secretary, Mr. J. Fletcher, were, “to collect information as to the ages at which the objects of it are employed, the number of hours they are engaged in work, the time allowed each day for meals; as to their actual state, condition, and treatment; and as to the effect of such employment, both with regard to their morals and their bodily health; and the Assistant-commissioners, whose Reports, with the evidence upon which they are founded, constitute the two bulky folios already published, appear generally to have discharged their important and irksome duties in a very commendable manner, although some of them are entitled to higher praise than the rest.

The great field of mineral labour embraced in the Reports of the Commission may be thus classified:—

I. COAL MINES.

Reported upon by

South Staffordshire	Dr. Mitchell; Samuel S. Scriven, Esq.
North Staffordshire	Samuel S. Scriven, Esq.
Warwickshire	Dr. Mitchell.
Leicestershire	The same.
South Durham	The same.
Yorkshire	{ Jelinger C. Symons, Esq.; W. R. Wood, Esq.; S. S. Scriven, Esq.
Lancashire	{ J. L. Kennedy, Esq.; A. Austitt, Esq.; J. Fletcher, Esq.
Cumberland	Jelinger C. Symons, Esq.
Northumberland	J. R. Leifchild, Esq.
Shropshire	Dr. Mitchell.

	<i>Reported upon by</i>
Forest of Dean	Elijah Waring, Esq.
Gloucestershire	The same.
Somersetshire	Dr. Stewart.
Cheshire	J. L. Kennedy, Esq.
Derbyshire	J. L. Kennedy, Esq.; J. M. Fellowes, Esq.
Wales	R. H. Franks, Esq.; R. W. Jones, Esq.
Scotland	T. Tancred, Esq.; R. H. Franks, Esq.
Ireland	T. Martin, Esq.

2. IRON MINES.

South Staffordshire	Dr. Mitchell.
Northumberland & N. Durham,	J. R. Leifchild, Esq.
Cornwall	Dr. Barham.
Devonshire	The same.
Forest of Dean	E. Waring, Esq.
Derbyshire	J. M. Fellowes, Esq.
Yorkshire	W. Rayner Wood, Esq.
Wales	{ Herbert Jones, Esq.; Rhys W. Jones, Esq.; R. H. Franks, Esq.
Scotland	{ T. Tancred, Esq.; R. H. Franks, Esq.

3. TIN MINES.

Forest of Dean	E. Waring, Esq.
Cornwall	Dr. Barham.
Wales	R. W. Jones, Esq.

4. LEAD MINES.

Cornwall	Dr. Barham.
Derbyshire	J. M. Fellowes, Esq.
Durham	} Dr. Mitchell; J. R. Leifchild, Esq.
Northumberland	
Cumberland	Dr. Mitchell; Thos. Martin, Esq.
North of Ireland	Thos. Martin, Esq.
Wales	H. S. Jones, Esq.
Scotland	J. Fletcher, Esq.

5. COPPER MINES.

Lancashire	A. Austin, Esq.
Cornwall	Dr. Barham.
Devonshire	Dr. Barham.
South of Ireland	Frederick Roper, Esq.
Wales	H. H. Jones, Esq.; R. W. Jones, Esq.

These five divisions comprise the principal works embraced in the Reports. There are a few slate, sulphur, and gold mines, noticed in the Reports, but the information connected with them, as to the main object of the inquiry, is scarcely sufficient to induce further notice of them here.

In order to render the treatment of the subject as lucid as possible, we shall divide it into several chapters, embracing the following topics:—

1. A descriptive account of the mines.
2. The persons employed in the mines.
3. The nature of their employment.

4. The physical condition and treatment of persons engaged in mining operations.
5. The moral and intellectual condition of the persons employed in the mines.
6. Miscellaneous topics, as wages, hours of labour, &c., of the persons employed in the mines.

CHAPTER I

DESCRIPTIVE ACCOUNT OF THE MINES.

I. COAL MINES.

THE coal-mines being those deserving, on every account, of the most attention, we shall be somewhat particular in our description of them.

Dr. Mitchell, in his Report on the working of the coal-mines in Shropshire, says, that when it has been determined to attempt to open a new mine for coals, two shafts are sunk near to each other, perhaps twelve or twenty yards apart. The diameter of each shaft is usually about seven feet. The mode of sinking a shaft is precisely the same as that of sinking a well in the country round London. The shaft is built round with bricks as the work proceeds, by a process known to builders by the designation of underpinning, and the water on the sides must be stopped out from getting into the shafts, in the same way as the water is kept out from the wells around London, by the use of cement, or, where that is insufficient, by inserting iron cylinders, which, when so employed, are in this district usually called tubs. In working the shafts, should they come to a bed containing a great body of water, which cannot be stopped out by such means, then a cistern must be formed in this bed, from which it must be pumped up; and it is evidently much more economical to remove it in this way, than to allow it afterwards to find its way down to a lower depth into the mine, from which it would have to be raised at a greater labour and trouble. When the shafts have been sunk to a certain depth, a difficulty of obtaining fresh air for the men begins to be felt, and a current is effected by making an opening from the one shaft to the other. The air descends one shaft, passes through this opening, and then ascends the other shaft: when the air has once been put into motion, it is not difficult to continue the current, and several modes are resorted to in order to make a commencement. A fire is lighted in one of the shafts, which sends a stream of air upwards, and thereby a fresh supply is drawn in from the other shaft. There is an instrument called the Blow George, which very much resembles the fan employed by farmers to winnow their corn, and may be worked by six men, three and three relieving each other; and in case of the work being continued at night, these six being then relieved by other six. The Blow George, when it is practicable, is worked by a band connected with the steam-engine. The air from it is forced into pipes, and sent down with great force to the bottom. This instrument is chiefly used, however, whilst a deep shaft is being sunk, or a level is being carried forward, called a heading, and before the work is sufficiently advanced to be able to make a circuit and a current of air through it.

After the shafts are carried to a certain distance lower down, a fresh

communication is made, and the former one is stopped up; and when at last the coal is reached, all communication is stopped, except through the mine, in which as early as possible an opening is made from one shaft to another, and a fire is placed in a grating, or, as it is called, a lamp, at the end of a stalk of iron, under one of the shafts, and is constantly kept burning. When the men come up at night, the last thing done is to put coals on the fire, and it generally keeps alight until they go down to work in the morning. From the foot of each shaft a road or gateway is carried forward into the mine. In Staffordshire, where there is the ten-yard coal, a horse-road is cut out of the coal, but in the districts where the seams of coal are very narrow, the roads are proportionably small. Occasionally the roof has to be supported by beams of timber. In the middle of the road, in some of the mines, rails are laid down, on which are carriages with low wheels, which are dragged by horses. It is just barely possible to stand close to the side, to keep out of the way of the horses and carriages whilst passing. The two horse-roads having been carried a short way from the shafts, a working is made in the coal from the one to the other, but only to the depth of the coal, and a small portion of the measure either above or below. When the communication between the two horse-ways is thus established, a door is placed in the direct passage which leads from the one shaft to the other, and is usually kept shut, so as to cause the air that comes down the one shaft to go forward and circulate through the mine before it ascends the other.

As the mine advances, other horse-ways are made, so that they may be able conveniently to reach every part, and then the system of ventilation becomes much more complicated, and many doors have to be erected in the horse-ways, and a boy is placed at each to open it when it is necessary to let any one pass, and to see that it is kept shut at every other time. The safety of the mine much depends on this duty being well performed, and so young children are likely to err, and cause great destruction of human life.

In some of the pits there are no horse-ways; the passages, or "gates," as they are called, being too small to admit of these animals. The strata of coal in some of the fields are not more than twelve inches thick, as in Gloucestershire; and to draw the coal along the gates in such mines, children are substituted for the horses. Mr. Scriven, describing the mines of the West Riding of Yorkshire, says, "I know but of two gates that will admit of the use of horses. In some of them I have had to creep upon my hands and knees the whole distance, the height being barely *twenty inches*, and then have gone still lower on my breast, and crawled like a turtle to get up to the headings. In others I have been more fortunately hurried on a flat board mounted upon four wheels, or in a corve,* with my head hanging over the back, and legs over the front of it, in momentary anticipation of getting scalped by the roof, or of meeting with the still more serious infliction of a broken head from a depending rock; whilst in others I have been enabled to accomplish my journey by stooping." These gates are sometimes of great length. Mr. Scriven mentions the Booth-town pit, in which he walked, crept, and rode, 1800 yards to one of the nearest "faces," or working places; the most distant was 200 further.†

* The basket in which the coal is drawn up.

† In Cumberland, many of the collieries go a long distance under the sea. In the William Pit, they have 500 acres under the sea, and the distance is two and a half miles from the shaft to the extreme part of the workings. The shaft is 110 fathoms.

The practice of forming the "gates" is to drive two heads, parallel with each other, right away from the shaft to the extreme boundary, alternately mining and stopping the bye-gates, which are formed at right angles as they proceed: one of them may be designated the hurrying-in gate, the other the hurrying-out gate. They then commence "getting" right and left, cutting out the coal, as will by and by be described.

The roads or passages along which the coal is brought from the seam to the shaft, resemble the streets of an oblong town placed on a plane inclined sideways, and where there is one main street, through its length, near its lower side, with small side streets rising out of it at intervals, and a drain below the main street along the bottom. Along these roads the children draw, or, as it is called, "hurry" the coal, in small square wagons, called "*corves*," "*corfs*," or "*dans*," proportioned to the height of the passages.

The varieties are very great in the working of collieries of different magnitudes, and where the seam of coal is of different degrees of thickness. But in all cases there are side passages cut up to the bank or face where the coal is hewn. In his report on the Durham coal-field, Dr. Mitchell compares a colliery to an old-fashioned window-frame, of which the bars represent the galleries excavated from the coal, and the small glass panes the parallelograms of solid coal, which remain till the field has been entirely intersected by the galleries or roads; and then as much of the remaining masses of coal is "robbed" as prudence permits.

The entrance into a pit is effected either by the shaft or by a horizontal or inclined road cut into the side of a hill. Dr. Mitchell thus describes his descent into a coal-pit near Dudley:

"After a skip loaded with coals was drawn up, a covering of the mouth of the shaft was wheeled forward, and the skip was let down upon it, and was unloaded of about 25 cwt. of coals. The party about to descend, four in number, then stood upon the skip, and laid hold of the chain to which it was attached. The skip was then hoisted a little to allow the covering to be wheeled off. We then descended with an agreeable, gentle motion, and soon observed the light to become less and less, until we were in perfect darkness, and ere long were at the bottom of the shaft. When we looked up, the mouth of the shaft seemed to be the size of a sugar basin. There were men in readiness at the foot of the shaft, who handed to each a candle, which we held by a piece of clay attached to the end of it. In a short time the eyes became reconciled to the sudden change of light, and we proceeded forward. The great road or gateway along which we passed was cut out of the coal, seven or eight feet wide, and about nine feet high. The thickness of the seam, being the ten-yard coal, would have allowed of making the road of greater height, but that would have rendered it more dangerous in case of anything falling out of the roof, from the velocity acquired in descending from so great a height. A railway is laid along the middle of the road, to make it easier for the horses to draw the cars. Soon it became necessary to stand to one side to make way for the horses drawing cars, each horse conducted by a boy of thirteen or fourteen, the lad naked from the waist upwards, and marching, his right hand at the bridle. We were conducted to a stable where were some horses eating and drinking, and apparently very comfortable. Their skins were smooth and glossy, and the animals were fat, which is attributed to the warm uniform temperature. It sometimes happens that when a horse is for the first time brought down into a coal-pit he falls in a fainting fit, which is supposed to arise from fear. A horse which has been brought down into a coal-pit is not for ever doomed to be deprived of the light of day. Some of these horses had been up, and been put to grass several times. It was stated afterwards, by a witness at Bilston, that donkeys could not endure the heat of the coal-mines, but were sometimes employed in the iron-mines, which are always found to be much cooler than the coal-mines, although both may be at the same depth from the surface of the earth.

"We came at last to the farther extremity of the pit in that direction, and then diverged by a working or treading from the gateway to the left, to a place where men were at work. The chief miners, the *undergoers*, were lying on their sides, and with their picks were clearing away the coal to the height of a little more than two feet. Boys were employed in clearing out what the men had disengaged. Portions are left to support the great mass until an opening is made on each side of the mass, and also part is taken away from the

back! This undergoing is a dangerous part of the work, as, notwithstanding all that experience and judgment can do, occasionally too much is taken away, and a mass of coals will suddenly fall and crush the men and boys engaged. Fortunate are they if they escape with their lives, but broken bones they cannot fail to have to endure."

Dr. Mitchell states, that, while in the mine, the candles of three of the party out of four who were in company in one place went out, but that on lighting them, and holding them a little higher up, no inconvenience was experienced, as the carbonic acid, being weightier than the air, falls as low down as it can. The Doctor also descended the Wallbut Pit, at Bilston, and he thus describes the adventure:—

"The water was said to have risen in the pit, and we were detained nearly an hour until the pumps had reduced it a little. We at last entered the skip, and whilst descending, saw, as we passed, the ten-yard coal, and much lower down, the "Heathen" coal. The beds at which we arrived, at the depth of eighty-one yards from the top, consisted of the new-mine coal and fire-clay coal, which here came very near to each other, there being only a thin parting between them, so that both seams might be worked at once. The first step from the skip went above the angle in water and wet coal-dust, and the second step was like the first. It was of no use then to be on ceremony, and we advanced forward. The water in one place was nearly knee deep, and through this part we went on a carriage with a skip drawn by a horse. The water everywhere fell from the roof in great drops like the shower of a thunder-storm out of the roof of the gateways. The horses had wax cloths spread over them to protect them a little from the rain. The water sometimes fell in spouts. It was stated that all this was merely the drainage of the water which had accumulated for ages in the coal and in the measures above it; and that in four or five months, by the time the gateways were completed, the mine would be thoroughly drained, and would be easily kept dry and comfortable with very little pumping. There was a long gateway of some hundred yards in length, and other roads coming off at right angles from it, from one to the other of which airways were drawn, which formed the means of ventilation.

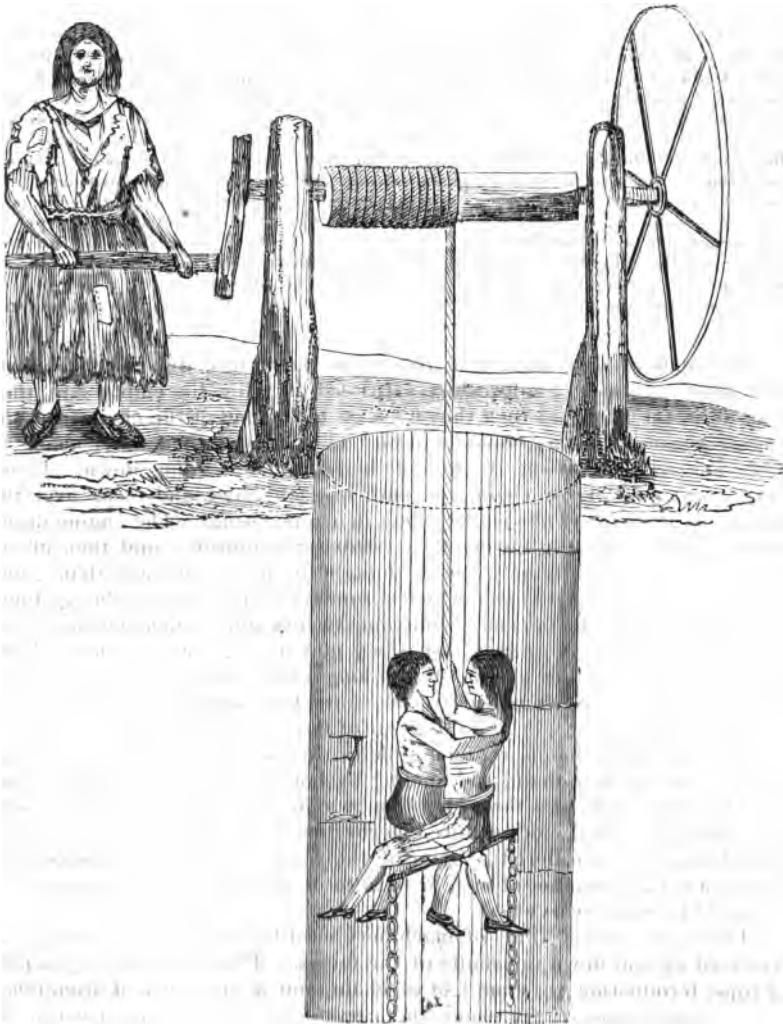
"In one place the gas bubbled up through the water, and when a candle was held to it there was a flash."

The mode of descent into a coal-pit in Shropshire differs a little from that most in use in Staffordshire. Instead of using the empty skip, they take away the skip, and then they hook on to the end of the chain from the engine a short chain by hooks at each end of it, and then other chains in the same way, according to the number of persons going down. Every man takes hold of his chain, one part in each hand, and steps over the double of it, and sits down like a boy in a rope-swing. The engine draws all up a little until the cover of the shaft be withdrawn, and then all go down together in a bunch. It is thought to be a safer way than going down in a skip, or in the tub, which is sometimes used when ladies or timid gentlemen venture to descend. Sometimes twenty miners, men and boys, come up in one bunch, and in such case a boy puts his legs across a man's thigh, and takes hold of the chain: if the long chain should break, all would perish together. Such an occurrence is rare, but a man was killed last year, near Wellington, by a brick falling out of the side of the shaft.

There is much that is reprehensible in this mode of descent and ascent. Merely sitting on a chain, and holding by both hands, is not nearly so safe as when the thighs pass through a loop, which is too narrow to let the body get through. In Leicestershire, Derbyshire, and in the great northern coal-field, it is considered a point of the highest importance not to allow above a certain number of men or boys to descend or ascend at a time, and it ought to be so everywhere.

There are various kinds of machinery used for drawing the persons and the coal up and down the shafts of the mines. The suspender is generally a rope, terminating in some feet of chain, and a cross bar of iron, called the "clatch-harness," by which the corve is suspended, or on which the

persons to be raised or lowered are seated. The turn-wheel represented in the following engraving is the least expensive, and certainly the most dangerous piece of machinery employed for this purpose, as you are, upon all occasions, dependent upon the man, or it may be, woman, who works it. It is in fact nothing more nor less than a common well-winch, with a fly wheel, without trap-door or stage, conducting-rods, or anything else. In getting on or off the clutch-iron, or corve, in coming up or going down, you are at the mercy of the winder. The unfortunate case of David Pellett, who was drawn over the roller by his own uncle and grandfather, at the North Bierley Pit, at the time Mr. Scriven was pursuing his investigation upon the same ground, just at the moment when their attention was called to a passing funeral, is a painful illustration of their unsafety.



The sketch given is intended to represent *Ann Ambler* and *William Dyson*, hurriers in Messrs. Ditchforth and Clay's colliery at Elland, in the act of being drawn up cross-lapped upon the clutch-iron by a woman. As soon as they arrived at the top, the handle was made fast by a bolt drawn from the upright post; the woman then grasped a hand of both at the same time, and by main force brought them to land. The corve on these occasions is detached from the hooks, to render the load lighter.

We need scarcely remark on the revolting indecency of this placing of a male and a female, each of them in an almost naked state.

The shafts are of variable depths, being, in some instances, as shallow as 45 feet, in others as low as 600. This difference is consequent upon the number of seams in work, and upon the undulations of the country; the measures also through which they are cut are as variable in character and density, consisting of loam, sandstone, ironstone, clay, gravel, shale, &c.; the greater number of them are lined with stones, bricks, or boards, as a means of protection. In many instances, however, as Mr. Scriven remarks, this necessary precaution is neglected; the consequence is, that when the earth is saturated with moisture, the measures are loosened, and large portions fall, or are struck off by the descending light corves, and alight on the children below. This was illustrated in his own person, in a pit he had descended, and where, just at the moment of disengaging himself from the corve and chains at the foot of the shaft, all around being dark and dismal enough, a stone, weighing five pounds, fell from near the top, close to his feet. Several children have been thus killed. Some few of the shafts have roomy excavations at the foot of them, which are indispensable provision for the safety of the children, and should be made imperative in every pit.

At the Eaton coal works, in Gloucestershire, the proprietors have caused a commodious "hutch" to be constructed, of riveted iron plates, in the form of an elliptical dome, with two entrances. In this, seven men and two or three boys can go up and down together, snugly protected from the jets of water, as well as from any stone or other substance accidentally falling on them. This humane and proper accommodation furnishes a praiseworthy contrast to the neglect of anything like attention to the health, safety, and comfort observable at other places. At Cromhall, Mr. Waring says he saw the poor fellows coming up in the coal tubs, at mid-day, to escape suffocation from bad air in the stalls, smeared with clay, and dripping with shaft-water, from which they partially protected themselves by hanging old sacks over their heads and shoulders. On inquiry, it was found that they had no other provision for their passage to and from their work.

Mr. Symons, in his description of the Yorkshire coal-field, says—

"That man must have strong nerves who for the first time descends a deep shaft, probably much deeper than St. Paul's Cathedral is high, without some degree of uncomfortable sensation. To a young child it is often cruelly frightful. It is difficult to describe the impression of dark confinement and damp discomfort conveyed by a colliery, at first sight. The springs which generally ooze through the best-cased shafts, trickle down its sides, and keep up a perpetual drizzle below. The chamber or area at the bottom of the shaft is almost always sloppy and muddy, and the escape from it consists in a labyrinth of black passages, often not above four feet square, and seldom exceeding five by six. As you proceed, the dampness decreases, and the subterraneous smell increases. Still these unpleasant sensations rapidly depart, even on a slight familiarity with the scene."

The greatest difference prevails in different collieries in regard to the state of the atmosphere and the dryness of the ground. It need hardly be

remarked, that the appearance as well as health of the work-people depends greatly on the attention paid to draining and ventilation. It will, however, very frequently happen that where the one is good the other is bad.

In very many collieries the ground is extremely wet, and the atmosphere humid, and of an earthy and damp smell. In some collieries both are equally well provided against, and always with the best possible effects on the health and comfort of the work-people. In a colliery at Mirfield, the men were found actually working in water, and in many others the children's feet are never dry, there being no engine-pump whatever, but merely a hand-pump to pump the water into a sort of dam to run out again into the gates. This colliery, nevertheless, belongs to a gentleman reputed for benevolence, but who knows nothing of his own pits. It is stated by some of the assistant commissioners, that neither drainage nor ventilation are sufficiently attended to for the health and comfort of the work-people in a majority of cases; whilst in some the ventilation is so imperfect that it is positively dangerous. Mr. Symons says, he has seen collieries where fire-damp or black-damp prevailed, and where slits for increasing ventilation ought to be cut every ten or a dozen yards, which are not now cut for upwards of fifteen and seventeen.

The general opinion is, that where mines are thoroughly ventilated, they are by no means unhealthy. One professional man, Mr. Sadler, is of opinion, however, that exclusion from the daylight alone is noxious.

The large and well-managed collieries in most districts seem to form the exception rather than the rule. In East Scotland, says Mr. Franks—

“ Few of the mines exceed the depth of one hundred fathoms. They are descended by shafts, and trap and turnpike stairs, and, in some instances, by inclines. The roads are most commonly wet, but in some places so much so as to come up to the ankles; and where the roofs are soft, the drippy and slushy state of the entire chamber is such that none can be said to work in it in a dry condition, and the coarse apparel the labour requires absorbs so much of the drainage of water as to keep the workmen as thoroughly saturated as if they were working continually in water.”

In Durham and Northumberland, the coal runs thick, and there Dr. Mitchell says—

“ The mines for the most part are dry, but there are exceptions. The roads and excavations in the pits are sufficiently spacious to allow room for working. There is this most decided advantage in the whole of this district, that the seams are not uncomfortably thin.

In Cumberland and the extreme south of Yorkshire, and nearly all the Midland districts, the seams generally run from five to ten feet in thickness, and in these few, hardships and horrors prevail. Mr. Kennedy, reporting on Lancashire, speaks of water pouring out of the roof in torrents: Margaret Winstanley, one out of numbers of his witnesses, states—

“ The place I work in is very wet; the water is half a yard deep in some places. My husband has worked in wet places for many a year; sometimes he has worked in water up to his knees, and does now, where he is at work. When I am drawing for him my clothes are all wet through.”

In the neighbourhood of Halifax, Mr. Scriven thus describes the kind of place in which children are employed, at ages, be it remembered, when the law deems them too young to endure the confinement of factories—namely, at six, seven, and eight years old:—

“ In the Booth Town Pit, in which Patience Kershaw hurried eleven corves a-day, I walked, crept, and rode 1800 yards, to one of the nearest ‘ faces;’ the most distant was 200 further; the bottom or floor of this gate was every here and there three or four inches deep in water, and muddy throughout. The Swan Bank Pit, to which I was accompanied

by Dr. Smith and Mr. Saunders, was almost as bad, and more resembled a city drain than anything else. In some of them I have had to creep upon my hands and knees the whole distance, the height being barely *twenty inches*, and then have gone still lower, upon my breast, and crawled like a turtle to get up to the headings."

Fanny Drake, one of Mr. Symons' witnesses, aged fifteen, who worked at Charlesworth's Wood Pit, near Wakefield, thus describes the condition of the place of work :

"It has been a very wet pit before the engine was put up. I have had to hurry up to the calves of my legs in water. It was as bad as this a fortnight at a time; and this was for half a year last winter. My feet were skinned, and just as if they were scalded; for the water was had—it had stood some time, and I was off my work owing to it, and had a head-ache and bleeding at my nose."

Many of the mines in Lancashire are very wet. In some I visited, the water pours out of the roof to such a degree, that persons descending are completely wet through by it. George Brown, at Messrs. Broom and Hulley's, gives the following description of the mines in the neighbourhood of Rainow :—

"The small mines in the neighbourhood of Rainow are nearly all exceedingly wet; I have worked there when half my body has been under water, and we have one man working in the deep level, who works constantly in water half way up his sides. The seams there are only fourteen inches thick, so that the pickmen are obliged to lie on their sides."

"I wish," says the sub-commissioner, "to call the attention of the Board to the pits about Brampton. The pits are altogether worked by boys; the elder one lies on his side, and in that posture holes and gets the coal; it is then loaded in a barrow or tub, and drawn along the bank to the pit-mouth without wheels, by boys from eight to twelve years of age, on all-fours, with a dog-belt and chain, the passages being very often an inch or two thick in black mud, and are neither ironed nor wooded. (J. M. Fellows, Esq., App. part II., p. 254.)

Some of these pits are much infested with foul air, or choke-damp, which is generally sufficiently dispersed by ventilation to admit the work-people with safety. There is a marked superiority in this respect in collieries worked on a liberal scale over others which have been properly enough denominated "slovenly pits."

The principle of ventilation for expelling the noxious gases is essentially similar in all collieries. It is thus stated by Mr. Fletcher :—

"Each colliery has two or more shafts, perhaps twenty yards from each other; one, the downcast pit, sunk towards the dip of the strata, for the air to descend; and the other, the upcast pit, towards their rise, for it to return to the surface. The current is generally quickened by a furnace in the upcast shaft, which, rapidly drawing off the air in the passages below, brings a brisk current through the whole distance from the downcast pit, however great that distance, by its purposed tortuousness, may have been made."

Mr. Leifchild, with the assistance of Mr. Buddle, has given a very elaborate and accurate description of the Newcastle mode of ventilation; but to his Report we must refer our readers, for the best analysis would not do justice to its merits. Of the gases in coal-pits, the following account is given by Mr. Leifchild :—

"The chief component part of inflammable pit-gases is carburetted hydrogen gas, mixed with unequal quantities of olefiant, carbonic acid, and nitrogen, &c., gases. They exhibit a very different degree of inflammability, when mixed with atmospheric air, according to the different proportions they contain of nitrogen, carbonic acid, and olefiant gases. The first two gases diminish—the last increases, their inflammability. The larger the amount of atmospheric air with which they can be mixed without losing their detonating power, the more dangerous are the explosive mixtures formed by them in coal-mines. Sir Humphry Davy found the most readily explosive mixture of fire-damp with common air to be one measure of the inflammable gas to seven or eight of air. The agent of the ventilation is the difference between the weights of two columns of air, one of which is at the natural tempera-

ture, and the other rarefied by the heat of the furnace. The degree of rarefaction being proportionate to the heat, it follows that, *ceteris paribus*, the efficiency of the ventilation is proportionate to the heat of the up-cast shaft; which heat is very variable in different collieries. The ventilating furnace naturally puts the current of air in motion in the straightest possible direction, and therefore to direct this current into the various intricacies of the workings, stoppings of brick or stone are used in the 'dead' passages, and doors in those passages used for the transit of coals."

In some of the mines they are greatly infested with vermin, &c. Speaking of one of the Shropshire collieries, in which he worked, Henry Canaing says:—"We have no mice in our pit, but there are many in other pits. We have many rats, almost as big as rabbits, quite as big as half-grown rabbits. They rob our bait bags, and tear the candles sometimes. They have caught a lighted candle in their mouths, and run away with it, and have exploded gas. They eat the horses' corn. We have thousands of gnats, and many spiders at the furthest part of the pit from the shaft, and forty-legs, and earwigs, and black bats (beetles). Mushrooms will grow in the stables, fifty yards from the shafts."

Dr. Mitchell, speaking of the Staffordshire mines, says, "Mice and rats abound in all parts, crickets are chirping everywhere, and there are gnats, forty-legs, and beetles."

We have now given, as far as we can do so in a moderate space, such a description of a coal-mine as will enable the reader to form a tolerably accurate notion of such a place, and of the discomforts and sufferings to which those unfortunate beings doomed to pass their lives in it are subjected.

Let us now take a similar glance at

II. AN IRON-STONE MINE.

There are many beds of iron-stone interspersed amongst the beds of coal and the beds of sandstone and indurated clay and shale which make up the coal-measures. Some of these beds of iron-stone consist of pulverized matter, with rounded boulders of iron-stone distributed through it, whilst other beds consist of a thin band of clay-stone, containing iron; and sometimes there is a band of such stone, usually of from two to five inches, then a thick band of eighteen inches to two feet clay, without iron; below which is another of similar clay-stone, containing iron. There are also beds containing flattened spheroids, called balls, very like in form to the flattened spheroids of cement-stone in the cliffs of the Isle of Sheppy, and, in like manner, having many fissures filled up with carbonate of lime.

Dr. Mitchell, who descended the iron-stone mine, called Bovuerex Mine, near Bilston, gives the following description of it:—

"The descent was exactly similar to that into a coal-pit. In going down the shaft we saw a bed of coal from two to three feet thick, which was stated to be the Heathen coal. All the rest of the shaft was bricked. After going down about 200 feet we arrived at the mine. There was there sufficient space cut out for men to stand and hook on the skips to the chains. A short way further on was room for half a dozen people to sit down. In this pit the working commenced close to the shaft, and gradually proceeded backwards from it, there being no danger of the ground falling in and occasioning the expense of a fresh shaft. It became necessary, as we advanced, to crawl on hands and knees, but occasionally the height was sufficient to enable us to crawl on hands and feet, which was easier. One of the gateways was very wet, water dropping down from above, and the road being very muddy below. Here and there was space enough at the side of the road to crawl out of the way of the cars, which the boys, all naked above the navel, were urging rapidly forward over the narrow pygmean railway." They laid their hands on the hinder parts of the car, and

stretched out with their feet far behind, their heads within two feet of the ground; they ferreted onwards, urging the cars before them. They were fine youths, and the work displayed the play of the muscles to advantage. This part of the pit was most disagreeable to survey, and it was with pleasure therefore that this gateway was left in order to proceed along the next, which was dry, and therefore much less disagreeable. We came at last to where the men were lying on their right sides, and striking with their picks. There was a thin seam, about two inches, of iron-stone on the top, and a seam of about the same thickness at the bottom. The intermediate measure between the top and the bottom necessarily had to be removed, but only the top and bottom were of use to be taken up the shaft; and the stone of the intermediate measure, as far as possible, was built up behind the miners to support the roof of the mine. We returned back to the place at the foot of the shaft, and rested there some time before coming up. Several of the miners sat down, and their conversation was about the dangers of their occupation, the deaths and broken bones, and the early age at which a man was reduced in strength so as no longer to be able to follow his trade, which was estimated to be about 42."

Mr. Waring describes some of the "primitive" iron mines in the Forest of Dean, called *scowles*, still worked on a small scale, near the village of Bream. The entrances to some of these grubbing-places appear to be more like rabbit burrows, or fox earths, than the mouths of mines. An insignificant aperture, generally beneath a mass of limestone rock, admits the miner, who descends, almost perpendicularly, either by notches cut in the rock, or wooden pegs driven into the soil, taking with him a light ladder, by which, at some stages in his progress, he lets himself down to his working place. The ore from these little mines is carried to the surface in "*billies*," a kind of saddle strapped to the shoulders of young boys, who crawl along the galleries, and climb into daylight, with the address and activity of monkeys. These concerns, however, are now carried on solely on a small scale, by old free miners, assisted by their own families, some of whom perform this toilsome work at the too early age of six years.

In South Wales, the iron ore is, to a large extent, worked in patches in open mines.

The iron-stone mines generally feel less warm to the miners than the coal-mines, although at the same depth below the surface. This arises from iron-stone being a much greater conductor of heat than coal, and therefore rapidly carrying off the surplus heat produced by the candles and the people at work. In two pits of equal depths from the surface, the one of iron-stone and the other of coal, which had been long unworked, the two thermometers would probably shew the same degree of heat; but if work was going on in both of them the thermometer would be higher in the coal-pit, and the wet and damp in the iron-stone pit would also make the men feel themselves colder than they otherwise would be.

III. A LEAD MINE.

In the lead-mines of Wales the descent and ascent are not made in buckets: part of the shaft is divided off for the purpose, in which ladders are placed, and at certain distances there are stages for resting. Every shaft is not exactly alike. In the larger works they are more convenient, and the ladders slope a little; in the smaller, the ladders are quite perpendicular, and not always boarded off from that part of the shaft allotted to the buckets in which the ore is brought to the surface. By the ladders so placed the miner finds his way in and out of the mines, holding a candle in one hand to light him in his progress. The depth of some mines is very great, and the exertion required for the ascent is very considerable. Mr.

Jones says, "I have seen the miners arrive on the surface much exhausted, panting for breath, scarcely able to speak. Observing the great distress which the ascent occasioned, I could not but conclude that the violence of the exertion must be injurious, especially to the more elderly miners and to those in whom bronchial affections already exist."

The shafts are frequently small in circumference, allowing but a very limited space for the miners to descend. "I measured one," says Mr. Jones, "from which three persons had just come to the surface in so exhausted a state that it was with difficulty they could speak—they panted for breath like horses after a race, and their faces were purple and swollen. The circumference measured only fifteen feet, so that I was astonished how the buckets in the centre of the shaft and the men on the ladders could find room in it; nor was there any one at the mouth of the shaft to prevent accidents during the ascent of these men. The proprietor and myself met there by accident as the men were ascending. I am sure it would be difficult in this shaft to pass a bucket in its descent without coming into contact with it."

Entrance into the lead mines of Durham and the adjoining counties is almost always by a level driven into the sides of the hills. In former times, shafts were frequently sunk from the top, but that is seldom the case now. The level is made about six feet high, sometimes seven feet high, and from three to four feet wide; and, where necessary, it is arched with stones. A railway for the wagons is laid at the bottom. By means of this level, a great deal of water may be brought out of the mine, the carts may be drawn in by the horses to a certain distance, and the ore may be brought out; and the miners may walk in to their work, or at least to the places where they ascend or descend. The level is usually driven into the hill, as far as possible, in the stratum called plate, being clay shale, if such there be, that stratum being softer and more economically worked than any other. The object in view in penetrating through the hill by means of a level is to arrive at a vein of ore, and when the working can be got on the first level it is most advantageous to all parties. In the level of the mine at Stanhope Burn, after going nearly half a mile forward, there are several chambers in which the men work, breaking down the lead ore by hammers and picks, drilling holes, charging with gunpowder, and firing off shots. It is stated that the level extends through the vein of limestone rock, with lead in it, as much as 200 fathoms.

As we shall not have occasion to notice very particularly the nature of the employment in a lead mine, we may here generally describe the mode of working ore, as it will convey a more accurate notion of such a place than can be gathered from what has been said.

In breaking down the rock the lead-miners use a pick, very like that employed in the coal-mines, also a great hammer. The first thing is to drill a hole in the rock with the jumper and hammer. The miners then insert a cartridge of gunpowder, and this they do in the same way as if charging a gun with a cartridge, so that it is the same whether the hole has been bored perpendicularly, horizontally, downwards, or sideways. Boys and young persons may drill the hole, but they are seldom trusted to charge with the powder. The next thing is to take a pricker, and insert it in the hole, and drive it through the cartridge, and keep it there for a time. Then they take what they call plate, which is pieces of black shale, and put it in at the sides of

the pricker, and with a driver, which has just been described, they force the plate down as far as it will go, and keep on at this work until they have filled up the whole of the hole round the pricker. Then the pricker is drawn out by inserting the scraper in the ring at the end, and which leaves a hole open down to the powder. The men thrust down this hole a squib, and they make a match, and one man puts it on the end of the squib. All the people, except this man, run away, and get into the level, or some place where the stone directly coming from the explosion cannot hit them, and they turn their backs for fear of any piece being reflected back into their faces. The man who has to fire off, then lights the match, and runs off as fast he can, and presently the shot goes off with much noise, smoke, and dust. The men return and find a chasm made in the rock, and with hammers and picks they strike upon every projecting piece of rock, and bring it down. The chamber where they work is now full of smoke, and every additional shot fired off makes the place worse and worse as they continue their work throughout the day. When the rock is wet, the patent fuse, being a slow match inside a rope, is found convenient.

When the miners have cut out the ore which is near the level, the level is arched over, and they proceed working upwards. The deads, or rubbish—that is, the rock not containing ore—is let down behind them, and they keep ascending. Different sets of men will be working in places above each other, and they are protected by scaffolding. When the ore is to be removed, it is let down a channel made for it, through an opening called a hopper, into the cart or wagon in the level. In some mines there is much work in the first level which is driven, but frequently it is necessary to ascend upwards, and make another level; and this is effected by drilling and blasting out the rock by gunpowder, and placing scaffolding by which the miners may climb up to their work. It is easier to work upwards than to work downwards; because in working upwards all the dust and broken pieces fall down, whereas in working downwards they accumulate at the bottom, and it is troublesome to remove them. The miners in their upward work make a small landing-place, and go from one stage to another, so that they may be able to place ladders or pieces of wood from side to side, and be afterwards able to climb up, and have halting places at short distances all the way. When arrived at the height thought best to fall in with the veins they move forward horizontally, or in a line parallel to the first level which was driven in from the air. It may be necessary to work upwards a second time, and form another flight of ladders, and then, after getting to a certain height, again to move forward further into the mountain in a line parallel to the preceding two, and it may be several times repeated. In like manner it may be expedient to follow the vein downwards, by sinking from one stage to another an opening for ladders, or flights of steps, to go down perhaps eighteen to twenty fathoms, or 108 to 120 feet. Then they may run an opening forward horizontally, or parallel to the first level, and after a time they may have to descend again as much as before, and then move forward, and so on several times, perhaps four, five, or six times, until the place of working may be 500 or 600 feet lower down than the first level. The miner who works in such a remote situation walks into the level, and comes on as far as the first descent by the ladders, down which he goes, perhaps with a load of tools on his back. He then goes on till he comes to the second flight of ladders, and descends; then onwards to the

third, and descends; and so on until he comes to the far remote place where he has to perform his work. He has no air except what comes from the level by which he has entered. There is nothing to make a current. Only slowly, and very slowly, can the air about him, merely by the effect of a difference of temperature, wind its way upwards, and make room for other air which may penetrate to take its place. Means may be taken to diminish an evil which cannot be removed. Sometimes a body of air may be forced in by a fall of a stream of water from the top surface of the hill. An opening is made for it to descend down to the level, which it does with great violence, driving a body of air before it, and then it runs out along the bottom of the level from the mine. Machines, or fanners, are also used, being worked by boys, and the air is carried along pipes to places to which it would otherwise only very slowly penetrate. Forcing pumps are also employed to force forward the air in a similar way. Sometimes a supply of fresh air may be got by running a second level from the air into the hill, and making a communication. In that case, the air may be put in action, and may enter at one level and go out by the other. Sometimes a shaft may be carried up to the open air, or let down from the open air into the level; and when that is done a current of air may be effected. Whatever is within the range of such current, of course, is well ventilated.

Such things, however, are not the general rule. In most mines there are not two levels communicating with the open air, neither can there be shafts from the open air down to the levels. Where nature does not interpose a physical impossibility, there is what is equally powerful—the dread of expense. The sum required to sink a shaft, or to run a level, may be so great that the mine is not worth it. The proprietor would rather discontinue working it than submit to the burthen; and the men, young persons, and boys, having no other means of existence, are eager to be allowed to work at the mine, such as it is.

The ore which is dug out of the level which enters from the open air is conveniently brought out by a horse and cart, the wheels of which run upon a railway. But the mine which is dug in what we may call the levels, but are here usually called shafts, above the first level, are let down holes or channels made for the purpose, from one level to another, down to the first or chief level, and are then brought out. The ore which is dug out in the sumps or levels, which are descended into from the first level, is hoisted up by whimseys from one level to another until brought up to the first level, where it is brought out to the open day. Young boys are employed to drive the horses in whimseys and in carts.

Water is raised from great depths by steam-engines and by the hydraulic engine. This is a great water-wheel, which works a pump. The water at the surface falls into the buckets of the wheel, and by its gravity causes the wheel to revolve, and the water from the buckets is discharged into the level. The pump brings up the water from a great depth below the level, and discharges it into the level, and then it runs out. This machine is cheaper than the steam-engine, as it requires no fuel and very little attendance, and of itself keeps working day and night.

The length of the levels driven into the hills depends on whether veins of lead are soon got or not. Some levels are half a mile in length, and some a mile, but not very often. There are, however, levels much longer;

and there is one very remarkable level in Northumberland, nearly five miles in length, called the Nent Force Level. For a long time there was water in this level, deep enough to carry boats, by which the ore was brought out; and an old boat was to be seen half sunk in the water in August last. The ore is now brought in carts to the foot of a shaft near Nenthead, and it is hoisted up by a whimsey.

A considerable quantity of ore is obtained by a method called "hushing." Where a great ravine has been formed by the streams on the side of a hill, and water comes down over the stones, and clay, and earth, and ore have been discovered, then it is known that it is a good place for hushing. A dam is made at the upper part, and a channel is made for the water, some of the larger stones being laid to one side; then, when the dam is let out, the flood of water, rushing down with all its fury, tears up the earth and stones with immense devastation, and lays bare new surfaces to view. Then the man who has undertaken the work, and the boys who assist him, go into the ravine and pick up all the ore laid open by the water.

IV. TIN AND COPPER MINES.

Dr. Barham, in his account of the great mining district of the West of England, which extends from the south-eastern borders of Dartmoor, in Devonshire, to the Land's End in Cornwall—a distance of about one hundred miles, has some introductory remarks upon the works employed for raising the tin, copper, and lead, found in that district, from which we shall endeavour to gather a description of the tin and copper mines.

When it is known or is thought probable that a lode which will repay the cost of working exists in a particular locality, the usual course of proceeding is to sink a shaft vertically to a certain depth in the first place. In so doing, the lode may be met with, or, as it is termed, "cut." If this is not the case, a gallery, or "level," is excavated (driven) at right angles to the shaft, in the assumed direction of the lode, and continued till it is reached. In either case, when the lode is reached, a level is driven horizontally along its course, and the miner then works upwards, and removes it from above. It must depend on the thickness of the vein, and also in some measure on its inclination, whether it is necessary to excavate any of the adjoining rock, and to what extent. Meantime, the shaft being sunk still deeper, another gallery or level is carried along the vein or lode, usually about ten fathoms below the former one, and the metalliferous stone intervening between the two levels is subsequently removed. This process is repeated again and again; and as the workings become more extensive in length, additional shafts become necessary in that direction. Horse and water power are employed for effecting the earlier operations, but the steam-engine is soon requisite in most of these mines; and, as they increase in depth and extent, more powerful machinery is needed to raise the excavated rock and the water. Shorter shafts, called *winzles*, are also formed at intervals between the levels, chiefly for the purpose of ventilation. It is clear that in proportion to the dip or inclination of the vein, there will be an advance in a horizontal direction, as the depth of the workings increases; and this may also render necessary communications from the lower levels to the surface more direct than can be furnished by the shafts originally adapted to the shallower ones. At a very early stage of this process a sepa-

ration is established between the shafts by which the men pass to and from their work and those in which machinery is employed. This separation is in the first place effected by the boarded division of a single shaft, and subsequently by the devoting of distinct shafts to these distinct purposes. Excepting the occasional raising of men and boys in buckets, through short distances, ladders are the universal means of ascent and descent in these mines. Many of the shorter shafts (winzes) are provided with ladders, so that the course taken by the miner is commonly not one of continuous descent and ascent, but is varied by his traversing at different intervals a considerable length of horizontal galleries.

The smallest height of the levels in these mines is stated to be five feet, and the thickness of the vein or bed of ore three feet. The natural condition of the shafts and levels, supposing no one to have been in them for some time, are darkness, and an air more condensed than on the surface, and a temperature higher in proportion to the depth. The proportion of deleterious gases occasionally present where the miner must labour (whether of sulphuretted hydrogen and sulphureous acid, which are very rapidly absorbed by the water lying in the levels, or of carbonic acid, which accumulates, like water, where there is no drainage) is great, and it is then that the distinctly poisonous effects of these agents are produced, and loss of life, either at once or more remotely, has often been the consequence. Carbonaceous particles from the candles and from blasting, and mineral dust from the working of the strata or veins, are also suspended in the air which the miner inspires, and give a peculiar character to his expectoration. Copper has even been detected by analysis in notable quantity in such air. In proportion as a mine increases in depth, the importance of ventilation increases, and it becomes, at the same time, more difficult to effect it thoroughly. As far down as the adit level there is usually a free perfation, and it is only in an "end," a cul-de-sac remote from the shaft, that the air can be materially impure. Further down, as no horizontal communication with the surface can exist, the interchange of ascending and descending currents of air affords the only natural supply; and by making the levels of large size, and establishing free communication between them by the short levels, called winzes, aëration (considered sufficient) is effected, even in the deepest mine in Cornwall, without the use of air-machines. In fact, those which have been hitherto commonly adopted are much more advantageously applied in the shallower mines or parts of mines. It is chiefly by the sinking of numerous shafts at short intervals beneath the lowest levels, and establishing free communications between them as speedily as possible, that the deeper mines have been rendered at all fit for the men to occupy. But no method hitherto introduced is adequate to maintaining the air in the places in which the miners work in anything like a state of purity; and even in those parts in which ventilation keeps up a fair supply of fresh air, there is in almost all mines a constant smoke after the first blasting in the morning; so that the shafts and galleries are not unlike chimneys, often sending out a visible column at the surface. The smoke is sometimes so thick that the miner can with difficulty see his hand.

From the nature of the case, the most advanced point of the excavation must be a cul-de-sac, and it will often be impossible to establish any communication with parts above or below. Hence it is that almost every miner in the deeper mines is at times exposed to what he himself designates "poor

air," by which he means air so impure as to affect him in a noxious way, distinctly perceived by him at the time. Of the less marked degrees of impurity he makes no account. Of the deficiency of oxygen, the excess of carbonic acid, the presence of sulphurous acid or sulphuretted hydrogen, he is not aware, and of smoke, however dense, he seldom takes any notice.

Every mine is more or less *wet*. It constitutes a receptacle for the waters permeating the strata through which it passes. The *adit* is the drain through which a great part of the water lying above its level, and a great part of that raised by machinery, is discharged. One or more of the deepest shafts are appropriated as wells, and from these the water is raised by steam-power—a preliminary process involving the greatest difficulty and outlay connected with the working of many mines.* The quantity of water in one mine differs exceedingly from that in another—partly in relation to the nature of the strata: thus mines in slate are generally wetter than those in granite. But a greater difference is artificially produced by the multiplication of mines in a district; the whole of its waters being thus distributed among many wells instead of a few, and the pumping being thus rendered less onerous to each.

Where a mine is situated near the coast, its drain or *adit* generally opens on the surface at a point very little above the level of the sea. When more inland, the deepest valley in the neighbourhood is the place of its discharge. In other cases, a large common adit has been driven from some valley, but little raised above high water, into the centre of an upland mining district, and the separate adits of the several mines open into this general drain. In many mines a large quantity of water is constantly poured through the interstices and fissures of the strata, and it is often of a temperature so much lower than that of the air in which the miners are at work, that they are subject to very serious chills from this cause. Under particular circumstances they are obliged to work more than half submerged.

It has been already stated that *ladders* are the universal means of ascent and descent in these mines. There are a few instances of veins emerging at the surface, and being inclined at such an angle that they have been followed and excavated without much other footway than steps cut in the rock;† but these are merely exceptions. The ladders vary in different mines, and sometimes in different parts of the same mine, from two and a half to ten fathoms in length, and from a direction nearly vertical to an inclination of two feet six inches, or even more, in the fathom. The distance between the levels being generally ten fathoms, or sixty feet, a single ladder very often reached, in former times, from one to the other. Some of these ladders are still found, but they are rare. The most usual length at present is from four to five fathoms.

Each ladder usually terminates on a platform (*sollar*), an opening (*man-hole*) in which leads to the ladder below. This is generally so situated that the ladders are parallel to each other. In a few instances there is, in addition to this platform, a penthouse placed between the back of the ladder and the walls of the shaft, so that it covers the passage to the ladder below,

* Such a well or pit at the bottom of the engine-shaft, the deepest part of the mine, is called the *sump*. When the water has been so far removed as to admit of the workings being carried on in the lowest levels, it is said to be in *fork*.

† There is one instance, at Carclaze, near St. Austle, of a tin-mine being worked, like a quarry, quite open to the surface. It is situated on some of the highest ground in the neighbourhood, and, if not very valuable as a mine, is very picturesque.

and prevents the risk of the descending miner falling more than a few feet, supposing the ladder to be from four to five fathoms in length, and the much greater risk of the falling of anything from above upon those who are below. A contrivance of similar intention is adopted in some mines—that of placing trap-doors over the man-holes, and making it a rule for the last man of a party to close them.

CHAPTER II.

OF THE PERSONS EMPLOYED IN THE MINES, AND THE NATURE OF THEIR EMPLOYMENT.

WE are now about to enter upon the most painful and revolting part of the subject to which this pamphlet relates—namely, that pertaining to the persons employed in the mines, and the nature of the work in which they are engaged.

The coal mines forming the most important feature in the Report of the Commissioners, we shall first address ourselves to these.

I. THE COAL MINES.

The persons employed in these mines may be divided into three classes—male adults, female adults, and children of both sexes.

We have not been able to ascertain the exact proportion which the adults bear to the children. The proportion of men to children employed in the iron-stone pits of Staffordshire is, according to Dr. Mitchell, 100 to 70; in the coal pits, in the same districts, it is 100 to 30. In some of the other districts, the proportion of children is larger. In the collieries in the east of Scotland, according to Mr. Franks' admirable Report, the number of men employed is 7382, while the children, male and female, amount to 3999; the number of the latter being much larger, in proportion, than in the Staffordshire district. The females, under 13, amount to 363; and those under 18, to 809. The female adults in the eastern Scottish mines amount to 1213.

The chief points to which we wish to call attention relate to the employment of women and children in these horrible subterranean works. We take the last-mentioned first in order, and introduce the subject by the following extract from the Report of the Commissioners. It forms part of the conclusions they deduce, and with justice, from the whole of the evidence comprised in the returns of the sub-commissioners. They say, it appears—

" 1. That instances occur in which children are taken into those mines to work, as early as four years of age, sometimes at five, and between five and six, not unfrequently between six and seven, and often from seven to eight, while from eight to nine is the ordinary age at which employment in these mines commences.

" 2. That a very large proportion of the persons employed in carrying on the work of these mines is under thirteen years of age, and a still larger proportion between thirteen and eighteen.

" 3. That in several districts female children begin to work in these mines at the same early age as the males.

"4. That the great body of the children and young persons employed in these mines are of the families of the adult work-people employed in the pits, or belong to the poorest population in the neighbourhood; some hired and paid in some districts by the work-people, but in others by the proprietors or contractors.

"5. That there are in some districts, also, a small number of parish apprentices, who are bound to serve their masters till twenty-one years of age, in an employment in which there is nothing of skill to be acquired, under circumstances of frequent ill-treatment, and under the oppressive condition that they shall receive only food and clothing, while their free companions may be obtaining a man's wages."

Mr. Franks, in his Report of the Collieries of South Wales, says—

"The number of the adults in the collieries and works I have visited, exceed 6408 under 18 years of age, and above 13 years of age upwards of 1540, and the number of children under 13 is far beyond 875; an exact total of persons and children employed could not be obtained, as several have not made their returns, and others have objected so to do.

"In the divisions in which the ages of those employed in the collieries and manufactures are respectively classed, there is no provision for the entry of the particular ages of young children under the age of 13 years; I, however, considered it my duty to make special inquiries into this branch of the subject, and although I am not enabled to prepare any table which will meet the question minutely, you will find in the evidence a sufficient number of instances to enable you to appreciate the very early age at which it is the practice to take children down to work in the mines, and that it can scarcely be said to be an uncommon occurrence for a child to work at the early age of *five years and a half*—this is the youngest age at which I myself have found any employed; but Mr. Thomas Josephs, mineral agent of the Plymouth Works, Merthyr Tydvil, in his evidence, states, 'Children are employed as air-door keepers at 5 years of age, as horse-drivers at 14, as colliers at 12 years of age.'

"Mr. Hananiel Morgan, agent to Sir Thomas Phillips, says on this subject—'Young boys are taken down *as soon as they can stand on their legs*;' and Mr. William Strange, medical assistant, Llanvabon, also states—'They [the people] certainly had a bad practice here of taking children down *as soon as they can creep about*, many as early as five or six years of age.'

"Mr. Samuel Jones, cashier of the Waterloo Colliery, says—'Fathers carry their children below at four or five years of age.' Mrs. Mary Lewis says—'My youngest boy, Lewis, was taken down at five years and three months old, and has been down ever since.' And in the returns of the Pentyrol Collieries, I find one child, John Thomas, aged five years and seven months, who has been a picker of scattered mine for his father, a miner, seven months, for which he received 2s. a-week; and one Edward Milward, aged six years, who has been an assistant to his father, a collier, for two months."

Joseph Richards, aged seven, collier, Buttery Hatch Colliery, parish of Mynyoddusllwyn, county of Monmouth, says—"Has been down three years and a half." Steward said he was sure the boy had been down at least three years, (App. part ii., p. 535, l. 8.) William Richards, aged seven and a half, Buttery Hatch Colliery: "I have been down about three years. When I first went down, I couldn't keep my eyes open; I don't fall asleep now; I smokes my pipe; smokes half a quartern a-week." This little fellow was intelligent and good-humoured; his cap was furnished with the usual collier candlestick, and his pipe was stuck familiarly in his button-hole. (No. 193; p. 534, ll. 28, 32.) William Skidmore, aged eight, collier: "Don't know how old I am; father thinks he is eight years; doesn't know when first went to work, it is so long since." The steward here stated he was certain the boy had been down four years. (No. 198, p. 535, l. 2.) William Smith, ten years old, collier: "Worked below four years and a half; works with father and brother; brother is seven years old, and has assisted father three years." (No. 201, p. 535, l. 17.) William Richards, aged twelve, coal-cutter: "Works with his father. Has been at work ever since he was four years old. Was taken to work by his father, because times were poor, and he was worth an extra tram." A tram or dram is the privilege of a cart of coal, as additional work. (No. 131, p. 525, l. 32.)

"Mr. William Jenkins, under-agent to the Gelligaer Collieries, further states, 'Children are taken down *as soon as they can crawl*.' Perhaps it is unnecessary to adduce further testimony in proof of a custom so general and so pernicious, and I shall add only the evidence of Mr. John Hoare, the cashier of the extensive works at Cwmavon—'Colliers take their children down to early and laborious employment; and where infants open and shut the air-doors, there is very little hope of amendment in the passing generation.' And Alfred Tunstall, Esq., resident and managing partner of the Melincrythen Chemical Works, remarks—'It is my decided opinion that the legislature would confer a great blessing on the community at large, by providing against such a system as I have witnessed, of *extorting labour from children*.'"

Mr. Jones, who had to examine a portion of the South Wales district, and of the contiguous English county of Monmouth, found more cases of the employment of children in the pits at very early ages, than in any other district. From the evidence of several witnesses, it appears that it is no very unusual thing for children in this district to be taken into the pits as early as four years of age.

Mr. Waring, one of the commissioners, says—"The great majority of boys in the Forest of Dean are doomed to earn their bread by underground labour In most cases, the boys are taken into the mines by their fathers or elder brothers, as soon as they are capable of earning the lowest rate of wages, by opening and closing doors in the pit."

It appears that the age at which children are first taken into collieries usually varies, in the thick coal pits, from eight to ten; and in the thin ones, from seven to nine. "Some," says Mr. Fletcher, "in Lancashire, are so young, that they go in their bedgowns. It is not," he adds most justly, "to be supposed that parents who employ their own children will be more scrupulous about their being set early to labour than if they sold their services to others; and, accordingly, the most improvident are pointed out by their fellow-workmen as those who have least mercy on the infantile capacities of their offspring. 'There are drunken blackguards,' states one of these, 'that would not mind at what age they took them. They went themselves into the coalpit so early, that they do not know their own duties. If there be justice for colliers' children, as for factory children, God send it!'" Instances appear, however, by no means rare, where infants of six, and even five years of age, are taken to attend the trap-doors, and often at seven or eight to assist an elder child in pushing the wagons. In all instances, the children remain as many hours, and not unfrequently more, in the pits than the adults. The reasons for the infliction of this cruel incarceration of very young children may be summed up—1st. In the assertion that unless early inured to the work and its terrors, the child would never make a collier. 2nd. That the thin coal pits could not possibly be worked with a profit otherwise; as after a certain age, the vertebræ of the back do not so easily conform to the required posture. 3rdly. That their parents cannot afford to keep them idle. It is universally remarked that the parents themselves bring their children at this early age of their own accord, and are frequently checked by benevolent employers. Margaret Jaques, seventeen years of age, says, "I have been seven years at coal bearing; it is horrible sore work; *it was not my choice, but we do our parents' will.*" And it is so everywhere.

We could much have wished to give an accurate account of the numbers of children who are thus employed, but that, as we have seen, is impossible. In some cases, the persons employed to collect the facts could not procure them; and in others, after having procured them, they have given them in a very loose and imperfect manner. We have laboriously gone through the greater number of the reports, for the purpose of laying before the reader such information on this topic as they comprise, but, after all, the result of our labour is far from being satisfactory. The following, however, will not be without interest; we would fain hope, not without use. It gives the number of boys and young people employed in some of the most important colliery districts:—

SOUTH GLOUCESTERSHIRE.	
Under 13 years of age	260
Under 18 years of age	400
	} Total, 660.

NORTH SOMERSETSHIRE.

Of all ages under 18 years 836.

NORTH STAFFORDSHIRE.

Under 13 years of age 94 } Total, 337.
Under 18 years of age 243 }

The employment of the children in the potteries prevents many being taken into the coal mines before the age of 13. In South Staffordshire it is common for them to begin when they are between 7 and 8.

HALIFAX AND BRADFORD.

Under 13 years of age 471 } Total, 699.
Under 18 years of age 428 }

Of whom 7 are females.

In this vicinity the children begin to work in the pits as early as 6 or 7 years of age. One case is recorded in which a child was set to work at 3 years of age! Out of 30 children at present at work, 17 are between 5 and 9 years of age.

LANCASHIRE COAL-FIELD.

Of 828 children of both sexes, upwards of two-thirds began to work before they were 9 years of age. Of that number, 3 began between 6 and 7; 309 between 7 and 8; 168 between 8 and 9; 131 between 9 and 10; 73 between 10 and 11; 44 between 11 and 12; and 25 between 12 and 13.

One case is recorded in which a child began to work in a coal pit in this district soon after he was four years of age. A. B. at Mr. Roscoe's, Rochdale, states, that "he is eleven years old; that he has been six years in the pits, and that he began to go when he was little more than four years old." (J. L. Kennedy, Esq., Evidence, No. 5: App., Pt. II., p. 201, l. 40.) And many cases are recorded in which children began to work in the pits when they were between five and six years of age, and at six.

Henry Jones, at Messrs. Clegg's, Pauldin-wood, near Oldham, says—"I am going on six years old, and am the youngest in the pit, excepting Jack Jones," (Ibid. No. 64: p. 226, l. 35.) Mr. Roscoe, Rochdale, proprietor of coal mine, says—"I believe that the great body of colliers have begun to work by the time they were five or six years old." (Ibid. No. 2: p. 200, l. 52.) William Cooper, aged seven years: "Has worked at Almond's coal-pits twelve months." (Ibid. No. 55: p. 224, l. 21.) John Wilde, at Messrs. Swire and Lee's, fourteen years old, says, "I began to work in the pit when I was six years old." (Ibid. No. 14: p. 207, l. 63.) William Wilde, at Messrs. Swire and Lee's, eighteen years old: "I went into the pit when I was six years old." (Ibid. No. 17: p. 208, l. 44.) James Yates, collier, fourteen years old: "Was about six years old when I first went to work." (Ibid. No. 57: p. 224, l. 41.) Mr. John Millington, superintendent: "The children, both boys and girls, generally begin at six years old, or from that to ten." (Ibid. No. 6: p. 202, l. 8.)

In the collieries on the south-eastern verge of Lancashire, cases are recorded in which children have been regularly taken into the pits to work at four, and between four and five, and several at five and between five and six years of age:—

Joseph Gott, aged fifty-three, Richard Barker, aged forty-six, the former an underlooker, and the last a labouring collier:

"A great many goes to pit before they be fit to go. Richard Barker went into the pit at five years old himself, and has in the pits four sons, who all went in under six years of age." (J. Fletcher, Esq., Evidence, Nos. 13 and 14: App. Pt. II., p. 850, l. 29.) James Jones: "Is going in thirteen; has been five years in the pit. Has thrutching for him his little brother, Henry Jones, who is going in six, and has been in the pit three months." (Ibid. No. 25: p. 853, l. 35.) John Jones: "Is seven years old; has been in the pit a year or more." (Ibid. No. 23: p. 853, l. 10.)

The Sub-Commissioner, as the general result of his personal investiga-

tion, says—"Of the adult mining population of this district, I am convinced that a very large proportion have commenced work as early as the sixth or seventh year of age." (J. L. Kennedy, Esq., Report, § 3, App. Pt. II. p. 149.)

It is but fair to state, however, that there is, in this county, a growing feeling against employing very young children in the mines; and there is a rule laid down at Worsley, in the Bridgewater trust, prohibiting the employment of male children under 10 years of age, and females under 12. Another fact to be noticed is, that the disposition evinced by many of the colliers to carry their children into the mines at so early an age, arises out of the inadequacy of their own earnings to support their families, and also out of the legal restriction that now exists against sending them to the neighbouring factories.

DERBYSHIRE COAL-FIELD.

Under 13 years of age	725	} Total, 1241.
Under 18 years of age	516	

The Sub-Commissioner for this district records several cases in which children began to work in the mines at five, and between five and six years of age.

PEMBROKESHIRE.

Under 13 years of age	45	} Total, 137.
Under 18 years of age	92	

Of whom 23 are females.

YORKSHIRE.

Under 13 years of age	1120	} Total, 2647.
Of whom 154 are girls.		
Under 18 years of age	1527	

Of whom 156 are girls.

It is not uncommon in this district for infants of five years old to be employed in the pits.

CUMBERLAND COAL-FIELD.

Mr. Symons says he can form no correct estimate of the number of children who work in the pits here; but they are not so numerous as in Yorkshire. They seldom commence work before 10 years of age, however.

NORTH WALES.

Mr. Jones says, "In the mines and coal-pits considerable numbers of children and young persons are employed; I have, however, no data on which to compute the numbers, as I have not had returns from all the works to which I sent tabular forms, and there are a great number of small works employing only a few hands to which I sent no forms. The returns that have been made me, and my own personal inspection, enable me to say, that the number of children and young persons employed in the mines and collieries in North Wales must amount to some thousands. It is only in the collieries of Ruabon that girls under eighteen are employed; in the mines no females have any employment. I have great satisfaction in reporting that, though girls find work at the pit mouth, they never go underground, such a practice has not yet found its way into the northern parts of the principality. The number who work on the surface is comparatively few, and the custom of employing females at all is confined to the district around Wrexham. In most cases, the females employed exceed the age of eighteen; as strength is required, there are but few under that age, and rarely any to be found under thirteen."

GLAMORGANSHIRE COLLIERIES.

Under thirteen years of age	385	} Total, 978.
Of whom 27 are females.		
Under eighteen years of age	588	
Of whom 43 are females.		

MONMOUTHSHIRE.

Under thirteen years of age	217	} Total, 617.
Under eighteen years of age	400	

PEMBROKESHIRE.

Under thirteen years of age	214	} Total, 702.
Of whom 19 are girls.		
Under nineteen years of age	488	
Of whom 119 are girls.		

There is evidence that some children begin to work in the pits of the Coalbrook Dale district, as the chief coal-field of Shropshire is called, as early as six years of age. One instance, indeed, came under the observation of the sub-commissioner, in which a child two years younger—that is, four years of age—was regularly taken into the pit by his father. “This remarkable instance became known to me,” says Dr. Mitchell, “when exploring the Hill’s Lane Pit, belonging to the Madeley Wood Company; the ground-bailiff, two charter-masters (the persons who contract to work the mines), and a labouring collier, accompanied me. ‘I say, Jonas,’ said the ground-bailiff, to one of the charter-masters, ‘there are very few children working in this mine; I think we have none under ten or eleven.’ The collier immediately said, ‘Sir, my boy is only a little more than four.’”

While the evidence is overwhelming, that in the Yorkshire district children are to be found in the coal-mines regularly at work at the ages of five, six, and seven, it is clear, from a careful perusal of the whole of the depositions, that this fact could never have been brought to light by the examination of the coal owners only. It is in general with extreme reluctance that this class of witnesses acknowledge that children begin to work in the pits even as early as seven years of age. With few exceptions, the evidence uniformly given by the coal-owners would indicate that they are ignorant of the extremely early ages at which children may be found working in their mines. The same remark is applicable to the tenor of the evidence given by the under-ground stewards and other agents. Some portion of this discrepancy, as the Commissioners suggest, may arise from the different ages at which individuals in the same district permit children to enter their pits; but witnesses belonging to both these classes almost all say that eight is the lowest age at which children begin to work.”

“In North Durham and Northumberland many children begin work in the coal-mines at very early ages. One case is recorded, in which a child was taken into the pit at four years and a half old; and several at five and between five and six.”

Robert Harle, Gosforth Colliery, aged sixteen, says—

“Has been down pits eleven and a half years, at this pit and Seghill.” (J. R. Lelfchild, Esq., Evidence, No. 137; App. Pt. I., p. 597, l. 2.)

William Hays, aged fifteen, Gosforth Colliery, says—

“Has been down his pit ten years; went down, therefore, at five years old.” (Ibid. No. 134; p. 596, l. 36.)

Thomas Dotching, Wellington Colliery, on the Tyne:

“Calls himself six years old, looks about seven; has been down the pit half a year. (Ibid. No. 4; p. 569, l. 59.)

Thomas Wigham, St. Laurens Colliery:

"Was down this pit when, his mother said, he was between five and six years old, a wee thing of a boy." (Ibid. No. 268; p. 623, l. 22.)

James Smeatim, aged seventeen, putter:

"Knows one boy, about five and a half years old, and very little, down the pit; his name is William Fraser." (Ibid. No. 429; p. 653, l. 10.)

Mr. George Elliott, aged twenty-seven, Monkwearmouth Colliery:

"Is the head viewer here and at Washington and Belmont Collieries; is very much pressed and entreated by parents to take children at a very early age, from six years and upwards. Has known boys of five years of age in some pits. Could give two names and instances of boys of five years of age being employed in pits in the county of Durham. One Robert Pattison, now employed down this pit, is now six years of age, and has been down four months. His father, who was not well off, earnestly requested that he might be taken, but the viewer did not know his age till yesterday, neither does the boy know his own age." (Ibid. No. 367; p. 643. ll. 33, 45.)

To the honour of Ireland it must be stated, that no young children appear to be employed in underground work, excepting some in the small collieries of Dunninglass and Coal Island, in the county of Tyrone.

It would have been of some value as well as curiosity could we have obtained a tolerable idea of the comparative number of adults and children working in the coal-mines of the United Kingdom. But the returns will not, for the reasons already stated, give us this information. The commissioners have, in their report, done something towards this, as far as their materials furnished them with data, by constructing four tables, comprising some of the coal-fields of England, east of Scotland, west of Scotland, and South Wales; that is, those fields from which a sufficient number of returns have been made to justify the conclusion that they afford a near approximation to the truth. From these tables, which, it is to be borne in mind, do not shew the actual number of persons employed, but only the proportion which each class and sex bears to the whole number of the work-people employed underground, the following conclusions are drawn:—

1. That in England, in three out of six districts—namely, in Yorkshire, Lancashire, and Northumberland and North Durham, the proportion of young persons to adults is about one-third; and in other three districts—namely, Leicestershire, Derbyshire, and South Durham, it is two-sevenths.
2. That in one district of Scotland—i.e., East-Lothian, the proportion of young persons to adults is nearly one-half, and that in the other districts it varies from one-third to two-fifths; while the proportion of children to young persons in all the districts, excepting Mid-Lothian and East-Lothian, is one-third and upwards.
3. That in the west of Scotland, the proportion of young persons to adults is under one-fourth, and that the proportion of children to young persons is under one-third.
4. That in one of the districts of South Wales, Pembrokeshire, the proportion of young persons to adults is two-fifths; and in the two other districts, Glamorganshire and Monmouthshire, it is nearly one-third; while in all these districts the proportion of children to young persons is much more than one-third.

But how much soever the employment of young male children in this severe description of labour is to be deprecated, the practice which prevails in many districts of subjecting young children of the female sex to it is still more reprehensible. It prevails, however, in Yorkshire, Lancashire, and some parts of Wales.

In many of the collieries in the West Riding of Yorkshire, as far as relates to the underground employment, there is no distinction of sex, but

the labour is distributed indifferently among both sexes, excepting that it is comparatively rare for the women to hew or get the coals, although there are numerous instances in which they regularly perform even this work.

In great numbers of the coal-pits in this district the men work in a state of perfect nakedness, and are in this state assisted in their labour by females of all ages, from girls of six years old to women of twenty-one, these females being themselves quite naked down to the waist.

"Girls," says the Sub-Commissioner, "regularly perform all the various offices of trapping, hurrying, filling, riddling, tipping, and occasionally getting, just as they are performed by boys. One of the most disgusting sights I have ever seen was that of young females, dressed like boys in trousers, crawling on all fours, with belts round their waists and chains passing between their legs, at day pits at Hunshelf Bank, and in many small pits near Holmfrith and New Mills. It exists also in several other places. I visited the Hunshelf Colliery on the 18th of January: it is a day pit; that is, there is no shaft or descent; the gate, or entrance, is at the side of a bank, and nearly horizontal. The gate was not more than a yard high, and in some places not above two feet. When I arrived at the board or workings of the pit, I found at one of the side-boards down a narrow passage a girl of fourteen years of age, in boy's clothes, picking down the coal with the regular pick used by the men. She was half sitting half lying at her work, and said she found it tired her very much, and 'of course she didn't like it.' The place where she was at work was not two feet high. Further on were men at work, lying on their sides and getting. No less than six girls, out of eighteen men and children, are employed in this pit. Whilst I was in the pit, the Rev. Mr. Bruce, of Wadsley, and the Rev. Mr. Nelson, of Rotherham, who accompanied me, and remained outside, saw another girl of ten years of age, also dressed in boy's clothes, who was employed in hurrying, and these gentlemen saw her at work. She was a nice-looking little child, but of course as black as a tinker, and with a little necklace round her throat. In two other pits, in the Huddersfield Union, I have seen the same sight. In one, near New Mills, the chain, passing high up between the legs of two of these girls, had worn large holes in their trousers; and any sight more disgustingly indecent or revolting can scarcely be imagined than these girls at work; no brothel can beat it. On descending Messrs. Hopwood's pit, at Barnsley, I found assembled round the fire a group of men, boys, and girls, some of whom were of the age of puberty, the girls as well as the boys stark naked down to the waist, their hair bound up with a tight cap, and trousers supported by their hips. (At Silkstone and at Flockton they work in their shifts and trousers.) Their sex was recognisable only by their breasts, and some little difficulty occasionally arose in pointing out to me which were girls and which were boys, and which caused a good deal of laughing and joking. In the Flockton and Thornhill pits the system is even more indecent; for though the girls are clothed, at least three-fourths of the men for whom they 'hurry' work *stark naked*, or with a flannel waistcoat only, and in this state they assist one another to fill the corves eighteen or twenty times a-day. I have seen this done myself frequently." (J. C. Symons, Esq., Report, § 111, et seq.: App. Pt. I., pp. 181, 182.)

Evidence to the same effect is given by all classes of witnesses in this district:—

Thomas Dunn, Esq., of the firm of Hounsfeld, Wilson, Dunn, and Jeffcock, chief manager, says, "Girls are worked naked down to their waist, the same as men." (J. C. Symons, Esq., Evidence, App., Pt. I., p. 226, l. 9.)—Mr. Thomas Peace, of the firm of Webster and Peace, Hunshelf Bank Coal-Works, says—"There are as many girls as boys employed about here." (Ibid. p. 233, l. 20.)—Mr. Charles Locks, coal-master and agent at Snafethorpe, near Wakefield! "Girls make better hurries than boys; the boys are often stripped all but a shirt." (Ibid., p. 279, l. 40.)—John Thorneley, Esq., one of her Majesty's justices of the peace for the county of York: "The system of having females to work in coal-pits prevails generally in this neighbourhood." (Ibid., p. 246, l. 44.)—William Bowden, underground steward to Messrs. Hounsfeld, Dunn, and Co., at the Soap-house Colliery, Sheffield: "In Silkstone pits, believes women and girls work dressed as men, and often naked down to the waist, just the same as men and boys. Decency is disregarded." (Ibid., p. 227, l. 16.)—Mr. William Hopwood, agent of Barnsley New Colliery: "In most of the pits round Barnsley, girls are employed in trapping and in hurrying; they do the same work as the boys." (Ibid., p. 243, l. 17.)—Martin Gomersal, underground steward at Barnsley Colliery: "It is common for girls to hurry in this neighbourhood. I never saw a woman get here, but I have at Silkstone. I have seen two women work like men there." (Ibid., p. 247, l. 29.)—William Pickard, general steward to

Sir John Lister Lister Kaye's Collieries: "I have known a married woman hurrying for a man who worked stark naked, and not any kin to her." (*Ibid.*, p. 280, l. 58.)

Edward Newman, Esq., solicitor: "I have been an inhabitant of Barnsley for eighteen years, and been in the constant habit of seeing the colliers and children passing to and from their work. At Silkstone there are a great many girls who work in the pits, and I have seen them washing themselves naked much below the waist as I passed their doors, and whilst they are doing this they will be talking and chatting with any men who happen to be there with the utmost unconcern; and men, young and old, would be washing in the same place at the same time. They dress so well after their work, and on Sundays, that it is impossible to recognise them. They wear earrings even whilst they work, and I have seen them with them nearly two inches long. There is a great deal of slang and loud talk between the lads and girls as they pass along the streets; and I conceive that they would behave far more decorously were it not for the dress and the disguise it affords. I have never heard similar language pass between men and girls respectfully dressed in Barnsley. Their dress, when they come out of the pit, is a kind of scull-cap, which hides all the hair, trousers without stockings, and thick wooden clogs; their waists are covered." (*Ibid.*, p. 250, l. 25.)—Mr. Crooks, surgeon, Barnsley: "Girls are employed in the pits as well as boys; and when they have a little relaxation all congregate together, and no one in particular to overlook them." (*Ibid.*, p. 267, l. 46.)

William Frood, collier: "Some of the men work quite naked, but very few; most work like me, with a flannel shirt and nothing else on." (*Ibid.*, p. 276, l. 16.)—Anne Hague, turned of thirteen: "Sarah Monhouse, 'gets' as well as hurries; she gets and hurries eight corves a-day." (*Ibid.*, p. 234, l. 23.)—Rebecca Hough, aged fourteen, examined whilst getting in the same pit: "I am a regular hurrier; I am used to help the getter. I often do it three or four times a-week. I help to fill and riddle, and then I hurry the corves down to the Bull-stake. I find the hurrying the hardest work. It is because I don't do much at getting that it tires me less." (*Ibid.*, p. 257, l. 49.)—Margaret Westwood, aged fourteen and a half, examined whilst hurrying and eating in Messrs. Stansfield and Brigg's Emryod Pit, Flockton: "I hurry for Charles Littlewood. I am let to him. He is no kin to me; he works stark naked; he has no waistcoat on, nor nothing." (*Ibid.*, p. 276, l. 25.)—Mary Holmes, aged fourteen and a half, Meal Hill, Hepworth: "I always hurry as you saw me, with a belt round my waist and the chain through my legs. I hurry so in the board-gates. I always wear lad's clothes. The trousers don't get torn at all." (*Ibid.*, p. 295, l. 22.)—Ebenezer Healey, aged thirteen: "There are girls that hurry in the same way, with belt and chain. Our breeches are often torn between the legs with the chain. The girls' breeches are torn as often as ours; they are torn many a time, and when they are going along we can see them all between the legs naked; I have often; and that girl, Mary Holmes, was so to-day; she denies it, but it is true for all that." (*Ibid.*, p. 295, l. 41.)

To the general correctness of these statements the sub-commissioners themselves bear testimony; for in the coal-pits examined by them, both at Barnsley and at Flockton, they saw many girls performing precisely the same work as the boys, the girls dressed in the manner described, and some of them as old as fifteen or eighteen assisting, and often brought by their work into personal contact with men perfectly naked.

It is stated by the sub-commissioner, that "it is not the custom of the Bradford and Leeds district to employ female children in mining operations;" yet it appears, from the evidence of Mr. Thomas Mackley, surgeon, Wilsden, four miles from Bradford, that there are "coal-mines lying rather apart from the general coal and iron mines of the Bradford district, in which girls are employed, and that in these pits the men work perfectly naked." (*App. Pt. II.*, p. *h* 28, ll. 3, 12.) It appears also, from the evidence of William Green, colliery steward of the Low-Moor Iron-Works, that some girls are employed in the pits even there:—"Not generally; some few; never many in this country; more formerly than now, but it never was common in this country to employ girls." (*App.*, *Pt. II.*, p. *h* 5, l. 60.)

In the neighbourhood of Halifax, girls from five years old and upwards regularly perform the same work as boys. It is stated by the sub-commissioner, that there is no distinction whatever between the boys and girls in their coming up the shaft and going down; in their mode of hurrying or

thrusting; in the weights of corves; in the distance they are hurried; in wages or dress; that the girls associate and labour with men who are in a state of nakedness, and that they have themselves no other garment than a ragged shift, or, in the absence of that, a pair of broken trousers to cover their persons.

Susan Pitchforth, aged eleven, Elland: "I have worked in this pit going two years. I have one sister going of fourteen, and she works with me in the pit. I am a thruster." (S. S. Scriven, Esq., Evidence, App. Pt. II., p. 103, l. 60; p. 104, l. 2.)—"This child," says the sub-commissioner, stood shivering before me from cold. The rags that hung about her waist were once called a shift, which was as black as the coal she thrust, and saturated with water—the drippings of the roof and shaft. During my examination of her, the banksmen, whom I had left in the pit, came to the public-house and wanted to take her away, because, as he expressed himself, it was not decent that she should be exposed to us." (Ibid., p. 104, l. 8.)—Patience Kershaw, aged seventeen: "I hurry in the clothes I have now got on—trousers and ragged jacket; the bald place upon my head is made by thrusting the corves; the getters that I work for are naked except their caps; they pull off all their clothes; all the men are naked." (Ibid., No. 26; p. 103, l. 8.)—Mary Barrett, aged fourteen: "I work always without stockings, or shoes, or trousers; I wear nothing but my shift; I have to go up to the headings with the men; they are all naked there; I am got well used to that, and don't care now much about it; I was afraid at first, and did not like it." (Ibid., p. 122, l. 54.)

In the greater portion of the Lancashire coal-fields it is the general custom for girls and women to be employed in the ordinary work of the mines; and an unusually large proportion appear to be so employed in the mines about Wigan, Blackrod, Worsley, Hulton, Clifton, Outwood, Bolton, Lure, St. Helen's, and Prescott.

Henry Eaton, Ringley Bridge, Bolton, surveyor of coal-mines: "I have been sixteen years and upwards connected with coal-mines, and I have been in almost all the pits in the neighbourhood of Bolton, Bury, Ratcliff, Lure, and Rochdale. There are women in all the pits in those neighbourhoods. I cannot say in which pits there are the most employed; they are employed in all; they are used as drawers." (J. L. Kennedy, Esq., Evidence, App. Pt. II., p. 208, l. 56.) | John Millington, superintendent of the collieries of Mr. Ashton, at Hyde: "They [the women whilst at work] wear a pair of drawers which come down nearly to the knees, and some women a small handkerchief about their necks; but I have seen many a one with her breasts hanging out. The girls are not a bit ashamed amongst their own pit set; it is the same as if they were one family." (Ibid., p. 202, l. 26.)

Throughout the whole of the district examined by A. Austin, Esq., North Lancashire, girls and women are regularly employed in the underground work of the coal-mines, just as boys and men. (App. Pt. II., p. 788, et passim.)

In Scotland, the employment of girls and women in the ordinary underground work of the coal-pits is even more extensive than in any part of England; but this practice is confined chiefly to the collieries in the east of Scotland. Of the employment of girls and women in the coal-mines in the east of Scotland, Mr. Franks says—

"It will now become a more painful duty to give a particular description of the employment of children and young persons in those departments in which their labour is used, and in which females are, equally with males, employed at very tender years. The *coal-bearers* are women and children employed to carry coal on their backs in unrailed roads, with burdens varying from $\frac{1}{2}$ cwt. to 3 cwt. It is revolting to humanity to reflect upon the barbarous and cruel slavery which this degrading labour constitutes—a labour which happily has long since been abolished in England, and in the greater part of Scotland, and, I believe, is only to be found in the Lothians, the remnant of the slavery of a degraded age." (App. Pt. I., p. 383.)

The preceding evidence shews how much the sub-commissioner is mistaken in supposing that the employment of women in this kind of labour is peculiar to Scotland and to the Lothians, and that the practice does not prevail in England.

Mr. Symons says, "Under no conceivable circumstances is any one sort of employment in collieries proper for females. The practice is flagrantly disgraceful to a Christian as well as to a civilized country. From the guarded evidence of Mr. Clarke, who states that it is 'not suitable work for girls,' to the indignant resolution of the collected body of the colliers themselves, that it is a 'scandalous practice,' I found scarcely an exception to the general reprobation of this revolting abomination." (App. Pt. I., pp. 182, 196.) And Mr. Franks states, that the employment of females in the mines of his district is universally conceived to be so degrading that all other classes of operatives refuse intermarriage with the daughters of colliers who are wrought in the pits; that it is a labour totally disproportioned to the female strength and sex; that it is altogether unnecessary; and that it is wholly inconsistent with the proper discharge of the maternal duties, and with the decent proprieties of domestic life. From the evidence he has collected, it appears that in the cases in which the proprietors of coal-mines have excluded females from their pits, a rapid and great improvement has taken place in the condition of the collier families, and that the measure, however reluctantly submitted to in the first instance, has given entire satisfaction to all classes.

In the course of the extracts we have given, sufficient will have appeared to justify such a determination as that formed by the other classes of operatives in the east of Scotland, not to intermarry with the females employed in mining-works. Let us, however, refer somewhat more particularly to the circumstances of degradation and immorality in which females thus working are placed, even at the hazard of some repetition.

Emily Margaret Patterson, aged 15, working in Messrs. Stansfield and Briggs', Low Bottom Pit, Flocktoun, Yorkshire, says—

"I wear my petticoat and shift when I hurry. I hurry for my cousin. He wears a flannel ridget, or waistcoat, and nought else." (App. I., p. 280.)

Betty Harris, aged 37, drawer at Mr. Knowles's, Little Bolton, says—

"There are six women and six boys and girls in the pit I worked in. It is very hard work for a woman. The pit is very wet where I work, and the water comes over our clog-tops always, and I have seen it up to my thighs. It rains in at the roof terribly; my clothes are wet through almost all day long. I never was ill in my life but when I was lying-in. My cousin looks after my children in the day-time. I am very tired when I get home at night; I fall asleep sometimes before I get washed. I am not so strong as I was, and cannot stand my work so well as I used to do. I have drawn till I have had the skin off me; the belt and chain is worse when we are in the family way. My feller [husband] has beaten me many a time for not being ready. I were not used to it at first, and he had little patience. I have known many a man beat his drawer." (Ibid., p. 280.)

Mary Glover, aged thirty-eight, at Messrs. Foster's, Ringley-bridge:

"I went into a coal-pit when I was seven years old, and began by being a drawer. I never worked much in the pit when I was in the family way; but since I gave up having children I have begun again a bit. I wear a shift and a pair of trousers when at work. I always will have a good pair of trousers. *I have had many a two-pence given me by the boatmen on the canal to shew my breeches.* I never saw women work naked, but I have seen men work without breeches in the neighbourhood of Bolton. I remember seeing a man who worked stark naked." (Ibid., p. 214.)

William Cooper, aged seven years, thrutcher, at Almond's:

"There are about twenty wenches, drawers, in the pit I work in. *They are nigh naked;* they wear trousers; they have no other clothes, except loose shifts." (Ibid., p. 224.)

Robert Hunt, underlooker to Messrs. Foster, Outwood:

"It is quite true that women work in the pits when they are in the family way. My last wife worked in a pit from ten years old; and once she worked all day in the pits, and was put to bed at night. That woman you saw in the pit, was in the family way, [alluding to a person I had seen in the pit.]

Betty Harris, drawer in a coal-pit, Little Bolton:

"I worked at drawing when I was in the family way. I know a woman who has gone

home and washed herself, taken to her bed, been delivered of a child, and gone to work again under the week." (*Ibid.*, p. 280.)

Betty Wardle :

"I have worked in a pit since I was six years old. I have had four children ; two of them were born while I worked in the pits. I worked in the pits whilst I was in the family way. I had a child born in the pits, and I brought it up the pit-shaft in my skirt ; it was born the day after I were married—that makes me to know." (*Ibid.*, Pt. II. p. 163.)

Mary Hardman, Outwood, near Leven :

"I am thirty-eight years old. I went into the pit when I was seven years old. I am a married woman, and was married whilst I worked in the coal-pits. I have had either three or four children born the same day that I have been at work, and I have gone back to my work nine or ten days after I lay down, almost always. Four out of the eight were still-born. I have seen women working in the pits whilst they were in the family way many a time." (*Ibid.*, p. 214.)

Fanny Drake, aged 15, who had worked at Charlesworth's Wood Pit for more than six years, said—

"I have had to hurry up to the calves of my legs in water. It was as bad as this a fortnight at a time ; and this was for half a year last winter ; my feet were skinned. . . . I had a head-ache and a bleeding at my nose. . . . We stop at twelve, but we have often to go into the hole to work at the dinner hour. We stop to rest half an hour and odd, sometimes. I stop to rest at hole with the getter, and there is none else with us. I work for James Greenwood ; he is no kin to me. I have a riglet and a shift and petticoat on in the pit. I have had a pair of trousers. The getter I work with wears a flannel waist-coat when he is poorly, but when he is quite well he wears nothing at all." (Appendix, I. p. 280.)

Nanny Margerson, aged 16, who works in the same pit, says—

"I wear a petticoat, and shift, and stays. The man I work for wears naught ; he is stark naked. I don't like being in the pit. I have four sisters, and three work in the pit." (*Ibid.*)

Mr. Thomas Howell, overseer to Graig Colliery, at Merthyr, says—

"We employ about fifty persons, out of which ten are under eighteen years of age ; one-third are females. I have been acquainted with this district many years, and have had many colliers under my charge at this and other works. The colliers in this part take both sexes down at very early ages. Females are employed on the bank at drawing coals. Many come to work from service, as it is less restraining, and more money is gained ; but it acts much to their injury, as among the mining men they acquire the habits of swearing and drinking, and soon lose that character for sobriety which this part was characterized for centuries. Friendly societies have much increased, and though the men cry out against the bastardy clause, yet they avail them more of the opportunity, and the women are certainly more reckless, especially those who work in mines and iron-works." (*Ibid.*, ii. 513.)

William Dyson, a hurrier in Messrs. Ditchforth and Clay's pit, West Elland, says—

"We have but one girl working with us, by name Anne Ambler, who goes down with us upon the clutch harness [as shewn in page 7] ; she wears her breeches when she goes down, and while at work ; and comes up the pit cross-lapped with us in the clutch harness ; when she is down she hurries with us in the same way as we do, without shoes or stockings ; I have seen her thrashed many times when she does not please them ; they rap her in the face, and knock her down ; I repeat, I have seen this many times. She does not like her work, she does not that ; I have seen her cry many times ; the men swear at her often ; she says she will be killed before she leaves the coal-pit."—(*Ibid.*, p. 103.)

Margaret Gomley, aged nine years, working a pit near Huddersfield :

"They flog us down in the pit, sometimes with their hand upon my bottom, which hurts me very much ; Thomas Copeland flogs me more than once in a day, which makes me cry. There are two other girls working with me ; and there was four, but one left because she had the belly-ache ; I am poorly myself sometimes with belly-ache, and sometimes head-ache. I had rather lake than go into the pit ; I get 5d. a-day, but I had rather set cards for 5d. a-day than go into the pit. The men often swear at me ; many times they say, ' Damn thee,' and other times, ' God damn thee (and such like) Peggy.'"

Mr. Scriven says—

“ I descended this pit, accompanied by one of the banksmen, and on alighting at the bottom, found the entrance to the main-way two feet ten inches, and which extended 500 yards. The bottom was deep in mire, and, as I had no corves low enough to convey me to the working, waited some time, under the dripping shaft, the arrival of the hurriers, as I had reason to suspect there were some very young children labouring there. At length three girls arrived, with as many boys. It was impossible in the dark to distinguish the sexes. They were all naked excepting their shifts or shirts. Having placed one into the corve, I gave the signal, and ascended. On alighting on the pit's bank, I discovered that it was a girl. I could not have believed that I should have found human nature so degraded. There is nothing that I can conceive amidst all the misery and wretchedness in the worst of factories equal to this. Mr. Holroyd, solicitor, and Mr. Brook, surgeon, practising in Stainland, were present, who confessed that, although living within a few miles, they could not have believed that such a system of unchristian cruelty could have existed.” (Ibid., p. 108.)

Speaking of Susan Pitchforth, a poor girl, Mr. Scriven says—

“ She stood shivering before me from cold. The rag that hung about her waist was once called a shift, which was as black as the coal she thrusts, and saturated with water, the drippings of the roof and shaft. During my examination of her, the banksman, whom I had left in the pit, came to the public-house, and wanted to take her away, because, as he expressed himself, it was not *decent* that she should be (her person) exposed to us. Oh, no! it was criminal above ground; and, like two or three other colliers in the cabin, he became evidently mortified that these deeds of darkness should be brought to light.” (Ibid., p. 104.)

This banksman's notion of decency would be very funny, were the whole affair not so deeply horrible. He seems to think that male miners have a vested right—an indefeasible claim—to the indecent inspection of the persons of young females.

Mary Burrett, aged fourteen, says—

“ I work at Messrs. Spencer and Illingsworth's; I work always without stockings or trousers; I wear nothing but my *shift*; I have to go up to the headings with the men; *they are all naked there; I am got well used to that, and don't care much about it; I was afraid at first, and did not like it.*”

Even the mere show and semblance of modesty is thus utterly and even avowedly destroyed; so say all who have marked the effects of these horrible circumstances.

John Thorneley, Esq., one of her Majesty's justices of the peace for the county of York, thus deposes :

“ I have had forty years' experience in the management of collieries. The system of having females to work in coal-pits prevails generally in this neighbourhood. I consider it to be a most awfully demoralizing practice. The youths of both sexes work often in a half-naked state, and the passions are excited before they arrive at puberty. Sexual intercourse decidedly frequently occurs in consequence. Cases of bastardy frequently also occur; and I am decidedly of opinion that women brought up in this way lay aside all modesty, and scarcely know what it is but by name. Another injurious effect arises from the modern construction of cottages, where the father, mother, and children are all huddled together in one bed-room: this tends to still more demoralization.” (Ibid., i. p. 246.)

Mr. James Sharp, under-ground steward of the Bowling Company, Halifax, says—

“ We have no girls in the establishment, we would not allow of it by any means; it would be wrong to do so, because they would have to mix with the men often naked; it is, in fact, not their labour, and ought to be entirely prohibited.” (Ibid., Pt. II. p. 118.)

Mr. Isaac Clayton, coal owner, Bowling Colliery :

“ We have no girls in our immediate neighbourhood. As a principle, I say that it is not prudent to employ them. I would not do so; it is not fit for them; it is disgusting, and it subjects them to many evils.” (Ibid., p. 115.)

Mr. Brook, coal owner, Norwood Green :

"We have no girls, because I would not have them; it is not their duty; I have worked in pits when there were girls, but I thought 'twas not decent; they were fourteen and sixteen years old; I have seen such indecencies and improprieties as to determine me never to give my consent to their being where I am again; you know what lads and lasses at fourteen and fifteen will do in such places; I therefore leave you to judge that their conduct is of the worst kind." (Ibid., p. 110.)

Mr. Emmet, coal owner, Norwood Green :

"Has no girls in his pits, nor does he think it proper to have them, because it is indecent and immoral." (Ibid., p. 111.)

We have now completed this irksome and really disgusting part of our task, and we feel thoroughly satisfied that all who read the facts that have been stated, as to the age of the children of both sexes employed—the nature of the work in which they are engaged—the revolting extent to which all the considerations of sex and decency are set at nought—the contamination and pollution to which boys and girls, from the tenderest age, are exposed—and the frightful consequences resulting from all these circumstances, will participate in the painful feelings which these details have excited within us, even inadequate as any description must necessarily be to convey a correct idea of the facts themselves, and not less in the deep conviction which we feel of the awful responsibility resting upon the legislature to interpose some means for ameliorating and improving the condition of the class of persons, especially of the younger ones, engaged in the wide, debasing, and corrupting field of mining industry. The necessity for such an interposition will be rendered still more apparent, if that be possible, when we have taken a survey of the physical and moral condition of the mining population.

II. TIN, COPPER, LEAD, AND ZINC MINES.

Unlike colliery labour, which has for its object merely to raise a mineral substance, capable of being hewn, to be used in the condition in which it is dug, that connected with the mines of metallic veins embraces not only the slow and difficult excavation of the ores from hard rocks, accomplished only by the constant aid of gunpowder, but likewise the 'dressing' of the ores, or the mechanical separation of the metallic as much as possible from all extraneous substances, and the 'smelting' of them into metal in its marketable form; and the consequence is, that the number of children and young persons employed *under ground* in the metallic mines is small.

The total number of persons employed in the mines of Cornwall is estimated at from 28,000, to 30,000; and in the mines of Devonshire, at about 1500. From returns received from certain mines in this district, in answer to a form of queries, it appears that out of 24,995 persons, there are—

Adult males	15,500
Adult females.	2700
Young males, from thirteen to eighteen	2720
Young females	1740
Male children, under thirteen	1639
Female	696

making the total number of children and young persons, out of the number mentioned, 6795.

We have constructed the following, out of a much more extensive table, in order to shew the number and ages of children and young persons employed in certain mines.

DISTRICTS.	Total under 13.			Total 13 to 18.			Total of Children & young persons.		
	M.		F.	M.		F.	M		F.
	U.	S.		U.	S.		U.	S.	
Cornwall, Western District .	39	246	13	184	227	115	223	478	129
Cornwall, Central } Part I.	10	488	168	167	406	522	177	894	690
District . . . } Part II.	53	417	255	167	362	587	520	779	1002
Cornwall, Eastern District .	9	204	66	58	269	261	87	478	465
Devonshire	17	101	38	60	131	90	50	232	191
	128	1456		636	1395		1064	2851	
Totals	1584	535		2331	1585		3915	2120	

(Dr. Barham's Report, App. Part I., p. 770.)

The total number of persons employed in the lead mines of the Alston Moor district is estimated by the sub-commissioner at upwards of 5000. Of these 2061 are returned as employed by Colonel Beaumont. Of this number those under thirteen years of age are 182, those between thirteen and eighteen are 250. Out of this number of children and young persons (432) there are employed underground only fifty-three, of which seven only are under thirteen. If the children and young persons employed underground be in the same proportion throughout this district, there will be but eighteen under thirteen, and 115 from thirteen to eighteen years of age. When the frost sets in, however, in the winter, there is a cessation from washing ores for three or four months, and most of the men and bigger boys go and work in the mines. (App. Part II., p. 725.) The London Lead Company does not allow the boys under fourteen to go into the mines in winter, but makes them go to school; a rule which is relaxed only in the case of the children of widows or persons having large families. (App. Part II., p. 757.)

No children appear to be employed underground in the metallic mines of Derbyshire, excepting a few near Bonsall, where the very poor people who work the mines in this vicinity occasionally take their own children to work with them. There are, however, some employed in the neighbourhood of Crick in washing ores. (Ibid., pp. 259, 360—363.)

The total number of persons employed in the Leadhills district is about 400, of whom very few begin to work underground under eighteen years of age. Nearly all the children and young persons employed about these mines are occupied on the surface in washing the ores. (Ibid., pp. 882, 883.)

In like manner very few children and young persons descend into the lead mines in North Wales; they are almost all employed on the surface, in breaking, picking, and washing the ore, so as to prepare it for the smelters. (Ibid., p. 366.)

In Ireland, adult labour is so cheap and abundant, that children and young persons are employed in far less proportion than in Great Britain. The number of adult females is also very small, and of these scarcely any work underground.

III. IRON-STONE MINES.

In consequence of the thinness of the beds in these mines, generally, horses and asses cannot be employed in bringing the iron-stone to the foot of the shaft, and, consequently, a proportionately greater number of children and young persons are required for this purpose. As, however, the iron-stone is heavy, very young children are altogether unable to perform the work, and are, therefore, not employed.

We have, in the preceding chapter, stated, that in South Staffordshire the proportion of men to boys in the iron-stone pits is estimated at about 100 to 70.

The great difference between the iron-stone mines of Staffordshire and Shropshire is, that whereas in the former county the seams of coal are thick, and the seams of iron-stone thin, in Shropshire it is the reverse, the seams of coal being thin, and those of iron-stone thick. One consequence of this difference is, that children and young persons are not so much required in the iron-stone pits of Shropshire as in those of Staffordshire; accordingly, the sub-commissioner states, that the persons employed about the iron mines is not a third of the number of those employed about the coal mines. (App. Pt. I., p. 41.) And of the persons employed, according to Mr. Tranter, agent to the Colebrook Dale Company, there is not so large a proportion of boys, and the reason is, that the mines are in general higher, and consequently there is room for men, for small horses, for donkeys, and, in some of them, for large horses. (Ibid., p. 79.)

In Derbyshire very few children and young persons are employed, and neither in this nor in any of the districts previously mentioned, are females employed in any kind of underground work. They are employed only on the surface, in breaking up the pieces of clod, and gathering out the valuable from the useless materials. The case is different, however, in

The East of Scotland, where girls, at very early ages, and women of all ages, are sent down into the iron-stone pits to work just as they are in the coal-pits; and all classes of witnesses bear testimony to the extreme severity of the labour.

Mr. Thomas Stevenson, overseer of the mines worked by the Shotts Company at Green Burn, and the under-ground workings at Shotts, in the county of Lanark, states, that "Parents will take their young ones below, and do so at the early age of eight years. There appears a desire amongst the men to keep the females out, and many who keep their wives at home object to the conduct of others who continue the bad practice. The employment is very fatiguing, and unfit for women; still many married ones continue to labour while pregnant."

From the West of Scotland, Mr. Tancred furnishes a table relative to the iron mines of that district, from which we take what relates to our present subject:—

Name of Mines, and of Owner or Lessee.	Number of Seams worked; Thickness and Depth of each.	Number of People employed.			Whether Females are employed; and Age at which Children begin to work.
		Adults.	13 to 18.	Below 13.	
Whiterigg, W. Dixon, Esq., New Monk- land Parish.	Seam 10 to 13 inches. Wild coal, 8 in. Working places, 22 in. high. Main-way, 3½ feet.	251	39	19	4 females; 1 child at 8 years, others at 9.
Staurigg Plaw-yards, Cairn Hill, Raiv- yards, Coatdye, New Monkland Parish, W. Baird and Co.	...	Not stated.	132	82	13 females; boys begin from 9 to 10 years old.
Shotts, Charles Baird and Co., Shotts Pa- rish.	Coal, 2 ft. 6 in. 6 ft. 9 in. Blaes & iron-stone, 1 ft. Depth, 16 to 28 fath.	240	41	32	49 females; children begin to work about 9 years old.

In South Wales, also, it is the custom to send children into the iron-stone mines at the same early ages as into the coal mines, and girls and women are employed in the former just as in the latter, with the same unhappy results. As an example of the evidence given on this subject we may cite that of Mr. P. Kirkhouse, overman to the Cyfarthfa collieries and iron-stone mines, Glamorganshire:—

“As far as memory will permit, I should say the number of children and young persons working below ground in the Cyfarthfa mines amounts to 400; out of the number, 50 may be females. The youngest are employed at the air-doors, and are taken below at very infantine ages, which cranks [stunts] their growth and injures their constitution, as well as keeping them in a state of ignorance of a very deplorable kind. The employment females are put to is the filling and drawing the drams [carts] of coal or iron-stone: it requires great strength. The main-roads are made as easy as the work will allow, by iron rails being run to the ends of the workings; but this does not alter the nature of the employment, which is certainly unfit for women, and totally deprives them, by the liberty it gives, of getting after-employ at labour of domestic kind.”

In the iron-stone mines of the Forest of Dean, a great many children are employed, but few at an earlier age than eight or nine years. No girls or women are employed in them in any kind of under-ground labour.

CHAPTER III.

OF THE NATURE OF THE EMPLOYMENT IN MINES.

It will have been perceived, from what has been said as to the various descriptions of mines, that the nature of the employment in each must be more or less different. We shall therefore follow the plan laid down in the preceding chapters, and treat, first, of—

I. THE EMPLOYMENT IN COAL MINES.

Speaking in general terms, the work in a colliery is divisible, first, into that of getting or hewing the coal; and, secondly, into that of conveying it from where it is got to the pit's mouth. In the former species of work, adults, and in the latter, children are for the most part employed.

The occupations of the coal workers may be thus classified:—

1. Holers, Miners, or Getters, as they are variously called.
2. Hurriers, Pullers, Pushers, Drawers, Wagoners, Helpers, Thrutchers, Carriers, or Thrusters.
3. Hookers-on.
4. Air-door Tenders, or Trappers.
5. Pony-drivers.

In some few districts, there are other occupations, but these are the chief.

The operation of getting coal is generally entrusted to adults, though in some parts young persons are to be found at the work.

Mr. Franks gives the case of William Woods, aged fourteen, who was a coal-hewer in the east of Scotland:—

“ I have been three years below; I hew the coal and draw it to the pit bottom. Was obliged to go, as father could work no longer; he is upwards of sixty. I gang at three in the morning, and return about six; it is no very good work, and the sore labour makes me feel very ill and fatigued; it injures my breath. We have no regular meal-times; food is not safe in the pit. The lads and lassies take oat-pieces and bread below; we drink the water sometimes; get other food at home, sometimes broth, potatoes, and herrings. Often been hurt, and laid idle for a few days, but never get the licks as many laddies do when the men are hard upon them. I live a mile away; I cannot say how many brothers and sisters are at home, think three besides myself. Was never at school till last summer, but left when the dark nights came on. Knows the letters; cannot read a short sentence; thinks there are six days in the week, and nine or ten in the fortnight, as the men reckon nine or ten days' work. Would go to church if had clothes, but canna gang the now. Father takes for my work; sometimes I get a bawbee on the pay-days; do not always shift myself, as the time will not allow.”

“ I examined this boy on the Saturday, at a cottage near the pit,” says Mr. Franks, “ and the state of exhaustion he was in can scarcely be imagined; his appearance bespoke great neglect and poverty.”



At Worsley, eighteen is the age at which boys are first allowed to get coal, and they are at that age considered "three-quarters of a man." Mining and sinking are operations only entrusted to the most experienced workmen, as great care and exactness are required in this work.

In some parts of Shropshire—the Colebrook Dale districts, for example—and elsewhere, the seams of coal are so thin that the men engaged in *holing* lie at full length in the workings, as represented in the frontispiece, and with a pick undermine the coal, taking out a certain portion of the measure beneath it. Supports of wood are employed to keep the coal from falling down and crushing the miner thus engaged. When a large portion is undermined, wedges are driven in above, and a mass of coal is brought down at once. Sometimes gunpowder is employed; sometimes it will happen that the measure below the coal is hard rock, whilst the measure above is indurated clay, and in that case the holer, instead of cutting away part of the rock below, cuts away a portion of the clay above, as being the easier method of the two; but the coal is less easily detached in this way than when it is undermined.

There is a great deal of art in getting coal. If it is not holed properly, the coal breaks up small, and is not so valuable for sale. Some colliers have not patience to keep to the pick for any length of time, but are constantly putting in the wedges; by so doing the coal is broken up in small pieces, or "burgey," as it is called. It is no uncommon thing to hear the little wagoners in the neighbourhood of Oldham express their contempt of such a man by saying, in a sneering tone, "He's nought but a burgey-getter." This last mode of getting coal makes the work a great deal more laborious to the workman, as in the other mode the weight of the large block assists in breaking itself off.

In his Report on Northumberland, Mr. J. R. Leifchild thus describes the operation of hewing the coal, which is much the same in all districts:—

"The hewer curves out about a foot or eighteen inches of the bottom of the seam, to the distance perhaps of three feet, and then 'nicks,' that is, cuts in with his pick, one of the nooks or corners of his board; by these means he has gained what he calls his 'fudd, or vantage.' This fudd is either brought down by the insertion of wedges or the blast of gunpowder, in which latter case he drills a hole in the opposite corner, fills it with gunpowder, lights the match, and retires till the coal is torn down by the explosion."

In the thin pits, the collier crouches in sundry contorted postures, or lies extended at full length, often perfectly naked, as in the frontispiece, excepting that the collier hews the side and not the roof of the mine. One position in which these men work is very remarkable; the thigh is thrown up, so that the right arm and side may rest upon it. This is by far the easiest mode of lying on the side. In several of the thinner mines in the neighbourhood of Rainow and Macclesfield, the seam of coal is so thin that the men are obliged to work on their sides, and they generally work naked; the reason generally given for so doing being, that it was inconvenient to work with clothes on, as clothes are apt to get into creases and chafe the skin. It will be readily imagined that the labour of the colliers is greater in the thinner mines than in the thicker ones; but by constant use they become habituated to this mode of working. Speaking of the position in which a man was working, as above stated, Mr. Kennedy says, "Had I not seen it, I could not have believed that a man could have worked with so much effect in so little space. The mine in which this man was working was not more than from eighteen to twenty inches in thickness. His chest was brought down so as almost to rest on the thigh, and the head

bent down almost to the knee; and even in this doubled-up position it was curious to see the precision and smartness with which he dealt his blows."

But our chief business is with the employment of young children in these mines—a thing that has been incidentally mentioned already, but which is worthy of being more fully described.

The chief occupation of children, when very young, is to open and shut the doors in the subterranean galleries, by which the current of air is kept in its proper course, for the due ventilation of the entire mine, from where it enters by one shaft, or by one-half of a shaft, to where it finds its exit by another shaft, or by the other half of the same shaft by which it descended. The ventilation of a large mine is a very complicated affair, and can be understood only by reference to a plan of the whole. Suffice it to say, that were a door improperly left open, on the passage of a whirley or carriage of coals through it, the consequence might be very serious, causing, at any rate, great heat and closeness at the place where the colliers are at work, and should there be any explosive gas issuing from the coal, a great risk of loss of life. The only expedient adopted to secure attention to the closing of these doors is to seat a child behind them, who, on hearing the approach of a whirley, pulls the door towards him, and shuts it again when the whirley has gone through. These doors are called *trap-doors*, and the children so employed *trappers*. In many pits, however, the ventilation is secured by keeping two distinct shafts in connexion, so that a natural current of air is caused, and trappers and trap-doors are dispensed with. This certainly is far better for the children, the employment being one of the most monotonous and deadening to all the mental and physical powers of a young child which can well be conceived. The trapper has to sit, often exposed to damp, completely in the dark, and in silence, from the time the coal begins to be brought forward by the drawers till the last whirley has passed, cheered only by the occasional gleam of a lamp from a passing whirley, or a few words from the drawers.

Dr. Mitchell, who does not, upon the whole, evince an undue amount of sympathy for the poor creatures, juvenile or adult, male or female, employed in the severe labour of the mines, thus describes the life of a little "trapper:"—

"The little trapper of eight years of age lies quiet in bed. The labours of the preceding day had procured sleep. It is now between two and three in the morning, and his mother shakes him, and desires him to rise, and tells him that his father has an hour ago gone off to the pit. Instant he starts into conscious existence. He turns on his side, rubs his eyes, and gets up, and comes to the blazing fire, and puts on his clothes. His coffee, such as it is, stands by the side of the fire, and bread is laid down for him. The fortnight is now well advanced, the money all spent, and butter, bacon, and other luxurious accompaniments of bread are not to be had at breakfast till next pay-day supply the means. He then fills his tin bottle with coffee, and takes a lump of bread, and sets out for the pit, into which he goes down in the cage, and walking along the horseway for upwards of a mile, he reaches the barrow-way, over which the young men and boys push the trams with the tubs on rails to the flats, where the barrow-way and horse-way meet, and where the tubs are transferred to rolleys, or carriages drawn by horses. He knows his place of work. It is inside one of the doors called *trap-doors*, which is in the *barrow-way*, for the purpose of forcing the stream of air, which passes in its long, many-miled course from the down shaft to the up-shaft of the pit; but which door must be opened whenever men or boys, with or without carriages, may wish to pass through. He seats himself in a little hole, about the size of a common fire-place, and with the string in his hand: and all his work is to pull that string when he has to open the door, and when man or boy has passed through, then to allow the door to shut of itself. Here it is his duty to sit, and be attentive, and pull his string promptly as any one approaches. He may not stir above a dozen steps with safety from his charge, lest he should be found neglecting his duty, and suffer for the same. He

sits solitary by himself, and has no one to talk to him; for in the pit the whole of the people, men and boys, are as busy as if they were in a sea-fight. He, however, sees every now and then the putters urging forward their trams through his gate, and derives some consolation from the glimmer of the little candle of about forty to the pound, which is fixed on their trams. For he himself has no light. His hours, except at such times, are passed in total darkness. For the first week of his service in the pit his father had allowed him candles to light one after another, but the expense of three halfpence a-day was so extravagant expenditure out of tenpence, the boy's daily wages, that his father, of course, withdrew the allowance the second week, all except one or two candles in the morning, and the week after the allowance was altogether taken away; and now, except a neighbour kinder than his father now and then drop him a candle as he passes, the boy has no light of his own. Thus hour after hour passes away, but what are hours to him, seated in darkness in the bowels of the earth? He knows nothing of the ascending or descending sun. Hunger, however, though silent and unseen, acts upon him, and he betakes to his bottle of coffee and slice of bread; and, if desirous, he may have the luxury of softening it in a portion of the water in the pit, which is brought down for man and beast. In this state of sepulchral existence an insidious enemy gains upon him. His eyes are shut, and his ears fail to announce the approach of a tram. A deputy overman comes along, and a smart cut of his yard-wand at once punishes the culprit, and recalls him to his duty; and happy was it for him that he fell into the hands of the deputy overman, rather than one of the putters; for his fist would have inflicted a severer pain. The deputy overman, moreover, consoles him by telling him it was for his good that he punished him; and reminds him of boys, well known to both, who, when asleep, had fallen down, and some had been severely wounded, and others killed. The little trapper believes that he is to blame, and makes no complaint; for he dreads being discharged; and he knows that his discharge would be attended with the loss of wages, and bring upon him the indignation of his father, more terrible to endure than the momentary vengeance of the deputy and the putters all taken together. Such is the day-work of the little trapper in the barrow-way. At last the joyful sound of "Loose, loose," reaches his ears. The news of its being four o'clock, and of the order "Loose, loose," having been shouted down the shaft, is, by systematic arrangement, sent for many miles in all directions, round the farthest extremities of the pit. The trapper waits till the last putter passes with his tram, and then he follows, and pursues his journey to the foot of the shaft, and takes an opportunity of getting into the cage and going up when he can."

Everything shews the life of the little trapper to be one of the most solitary and painful description. Mr. Symons says—

"As their office must be performed from the repassing of the first to the passing of the last corve, during the day, they are in the pit the whole time it is worked, frequently above twelve hours a-day. They sit, moreover, in the dark, often with a damp floor to stand on, and exposed necessarily to drafts. It is a most painful thing to contemplate the dull dungeon-like life these little creatures are doomed to spend—a life, for the most part, passed in solitude, damp, and darkness. They are allowed no light, but sometimes a good-natured collier will bestow a little bit of candle on them as a treat. On one occasion, as I was passing a little trapper, he begged me for a little grease from my candle. I found that the poor child had scooped out a hole in a great stone, and, having obtained a wick, had manufactured a rude sort of lamp, and that he kept it going as well as he could by begging contributions of melted tallow from the candles of any Samaritan passers by. To be in the dark, in fact, seemed to be the great grievance with all of them. Occasionally, they are so posted as to be near the shaft, where they can sometimes run and enliven themselves with a view of the corves going up with the coals, or, perhaps, occasionally with a bird's-eye peep at the daylight itself; their main amusement is that, however, of seeing the corves pass along the gates at their posts. When we consider the very trifling cost at which these little creatures might be supplied with a light, as is the case in the Cumberland collieries, there are few things which more strongly indicate the neglect of their comfort than the fact of their being kept in darkness—of all things the most wearisome to a young child."

Mr. Scriven, who reports upon the Yorkshire coal-field, says—

"The children that excite the greatest commiseration are those who stand behind the doors, to open and shut them for the thrusters to pass; they are called "trappers," who, in the darkness, solitude, and stillness as of night, eke out a miserable existence for the smallest amount of wages. In the best-appointed mines the air is rarified by a fire, which is kindled at the foot of the up-cast shaft; the atmospheric air is directed down another, called the down-cast shaft, and is then made to pass into the remotest corners of the pit by doors placed at intervals in the main-gates or bye-ways. The trappers are therefore made to stand

at the back of these, holding a cord in their hands, all the day long. I can never forget the first unfortunate creature that I met with : it was a boy of about eight years old, who looked at me as I passed through with an expression of countenance the most abject and idiotic—like a thing, a creeping thing peculiar to the place. On approaching and speaking to him, he slunk trembling and frightened into a corner, under an impression that I was about to do him some bodily injury, and from which neither coaxing nor temptations would draw him out."

Mr. Leifchild bears similar testimony to the nature and effects of their employment. He says—

"Of the circumstances of their employment, a series of descriptions, often expressed in graphic, though homely phraseology, from opposite classes of witnesses, might have been produced. Functionaries of the mine, and partisans by their position, would sometimes render such accounts as might induce strangers to deem them a race of children deservedly the objects of envy ; while, as the reverse, others would depict their condition as one of unmitigated misery. The age, ignorance, and inanity of the children were adequate causes why lengthened answers, descriptive of their duties and feelings, could neither be elicited nor expected from themselves ; while the uniformity of both the one and the other rendered repeated delineations unnecessary. From such as are preserved, ample information may be gathered.

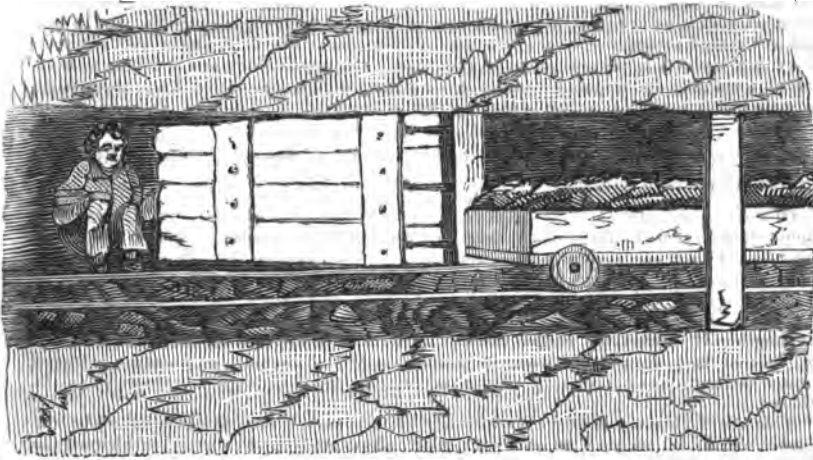
"That the circumstances of the occupation of the trapper are not physically injurious, the evidence will by no means establish ; that they are mentally and morally pernicious, can scarcely be denied. While a statement of these circumstances, which should assign to each cause its due proportion of effect, may be very difficult to produce, it is no unwarrantable assumption to affirm, that the unbroken monotony of the duty, in conjunction with its duration, and the darkness, solitude, and other peculiarities of the scene of its performance, must at least blunt the feelings and deaden the intellect so as to diminish the capabilities of receiving instruction. The perpetual recurrence of the vacant stare, or of the heedless " I don't know," in answer to reiterated and varied questions, accompanied by the paraphrases of their companions, at and away from the scene of duty ; and the absence of the most rudimental instruction, were of themselves sufficient symptoms of this morbid condition.

"The diminutiveness of some of the trappers was remarkable, and suggested grave doubts of the statements given of their ages. That, however, children of *five years of age* should ever, under any circumstances, be engaged in pits, would have appeared incredible but for the respectability of the informants, who stated their knowledge of such facts, though they were unwilling to have it included in their evidence.

"In adverting to the tremendous responsibility unconsciously incurred by these almost infantile keepers of the lives of scores of human beings, all their superiors in age, and commonly including their own fathers, we cease to regard the door-keeper as a mere mechanical adjunct to the mine. Viewed in this light, the onus of his duty can scarcely be overrated ; and of the results of its temporary neglect I witnessed a melancholy demonstration in the horrible scenes exhibited in and around the exploded pit at Wellington colliery, on which the agent concludes that, 'the cause of the dreadful accident, so destructive both of life and property, is supposed to have been the negligence of Cooper, the 'trapper,' &c. Since my return, too, an explosion has occurred at Thornley colliery, on August 5th, by which nine persons have been killed ; all, save one, young persons and children. This accident, the viewer writes to me, 'had originated by the trap-door being neglected, and the gas afterwards coming in contact with the lighted candle at the trap-door.' How many mining catastrophes are due to the negligence of door-keepers it is neither possible to affirm nor judicious to conjecture, inasmuch as the violence of the explosion at the spot where it originates usually sweeps away all indications of its immediate cause. In the list of accidents which I have subsequently given, it will be seen that thirty-four lives were lost at Jarrow colliery in 1826, by a trapper, eight years of age, leaving open his door. But while few explosions have happened, the origin of which has been so distinctly traced and so readily assigned to the heedlessness of trappers as the above instances, yet the liability to such fatal occurrences is neither disputed nor diminished."

Mr. Kennedy :

"The annexed sketch is the section of a thin mine, and shews an air-door tender in the act of opening an air door to allow a wagon to pass through ; sitting on his heels, as is the universal custom of all colliers, young and old, in this district. This employment is the one to which children are generally put, on first entering the mines ; and it is one of the most pitiable in a coal-pit, from its extreme monotony. Exertion there is none, nor labour, further than is requisite to open and shut a door. As these little fellows are always the youngest in the pits. I have generally found them very shy, and they have never any-



thing to say for themselves. Their whole time is spent in sitting in the dark for twelve hours; and were it not for the passing and repassing of the wagons, it would be equal to solitary confinement of the worst order."

But let us hear some of these poor children tell their own sad story. The four following were in collieries in Glamorganshire :

Jane Richards, thirteen years old :

" Been eighteen months cleaning the tram-roads on the coal-hill. Was under ground before for six years, keeping an air-door. Never got hurt very much. Often fell asleep, as all the little ones do when their lamps go out."

Philip Phillips, nine years old :

" Began work when seven years old. Has often fallen asleep when tired. Runs home and gets bread and cheese. Was burnt by the fire-damp nine months since, and laid by five months, expected to die. When the accident took place, some men were in the mine; one had gone into the old work. The men were first burned. I was carried home by a man; the fire hurt me very badly; it took the skin from my face. Have returned to work three months. Father is a carpenter. Mother has eight children, three out at work." [Face quite disfigured.]

Mary Reed, twelve years old :

" Been five years in the Plymouth mine. Never leaves till the last dram [cart] is drawn past by the horse. Works from six till four and five at night. Has run home very hungry; runs along the level, or hangs on a cart as it passes. Does not like the work in the dark; would not mind the daylight work."

Mary Davis, near seven years old :

" A very pretty little girl, who was fast asleep under a piece of rock near the air-door below ground. Her lamp had gone out for want of oil; and, upon waking her, she said the rats or some one had run away with her bread and cheese, so she went to sleep. The oversman, who was with me, thought she was not so old, though he felt sure she had been below near eighteen months."

Here are some others:

John Saville, seven years old, collier's boy at the Soap Pit, Sheffield :

" I stand and open and shut the door; I'm generally in the dark, and sit me down against the door; I stop twelve hours in the pit; I never see daylight now, except on Sundays; I fell asleep one day, and a corve ran over my leg and made it smart; they'd squeeze me against the door if I fall to sleep again." (App., Pt. I. p. 228.)

Sarah Gooder, aged eight years :

" I'm a trapper in the Gauber Pit. I have to trap without a light, and I'm scared. I go at four, and sometimes half-past three in the morning, and come out at five and half-past. I never go to sleep. Sometimes I sing when I've light, but not in the dark; I dare not sing then. I don't like being in the pit. I am very sleepy when I go sometimes in the morning. (Ibid., p. 252.)

James Sanderson, eight years old :

" I am a trapper. I sit in the dark all the day, or run at the bottom of the pit and come back." (Ibid., p. 231.)

Samuel Hirst, aged nine years and four months, Jump Pit :

" I sit by myself. I never have a light. I sit still all day long, and never do anything except open and shut the door." (Ibid., p. 235.)

William Martin, not ten years old, Messrs. Houldsworth's Colliery :

" I trap two doors. I never see the daylight, except on Sundays." (Ibid., p. 232.)

Another species of employment of the children in coal-pits is that called "putting," in the North; "hurrying," in Yorkshire; and waining, wagoning, helping, &c., elsewhere. It consists in conveying the coal from the heading, or bank face, where it is hewn, down along the roads to the bottom of the shaft. It is performed by loading small wagons, called "corves," or "dans," with the coals, and pushing them along a passage. In the very large coal-pits, where the seam exceeds five feet in thickness, it is usual to have a horse-road, into which the side, or board-gates, (i. e. galleries,) open, and the distance of putting or hurrying is hereby lessened. From fifteen to twenty-five of these corves are generally loaded and conveyed in a day; and they weigh, in the Yorkshire thick coal-pits, from six to ten hundred-weight, and in those of Northumberland about the same.

William Tranter, ground-bailiff, in the Coal Brook Dale district, says :

" In the coal-mines some boys are employed in bringing the coals in small carriages, called dans, to the horse-road, and others in pitching them into the carriages drawn by the horses. The mines are too low for men to do such work. Some of them are two feet in thickness, but there are places to go through, at times no more than eighteen inches, or perhaps twenty inches. The boys crawl on their hands and knees." (App., Pt. I., p. 79.)

When a child has to drag a carriage loaded with coals through a passage "not more than 18 inches in height," some ingenuity is required to get his body and the carriage through this narrow space. "The boys," says Mr. Tranter, "crawl on their hands and knees." But an expedient has been adopted with a view of facilitating this labour, of which the sub-commissioner gives the following description: "A girdle is put round the naked waist, to which a chain from the carriage is hooked and passed between the legs, and the boys crawl on their hands and knees, drawing the carriage after them." This is called, "drawing by the girdle and chain," and a most cruel thing it is.

"Mr. William Lloyd," continues the sub-commissioner, "an old miner who was sent to me to the inn at the Iron Bridge, with specimens of coal and iron-stone, on being asked his opinion of the girdle, replied, 'Sir, I can only say of it what the mothers say—It is barbarity! barbarity!' (App., Pt. I. p. 35.)—'All the great companies,'" he adds, "have made an advance in civilization, and have substituted the railroad and the dan for the girdle and chain; but there are still some persons, generally of small capital, who lease a small pit, and instead of a steam-engine, use a horse and a gin, and instead of laying down a small railway in their pits, employ boys to drag with the girdle and chain. The examination of the children shews there is much more of drawing with girdle and chain, in the smaller pits in this district, than what from the evidence of the managers of the large companies we should have supposed. The great cruelty of the system is, when there are no rails laid down in the road, and which poor masters, from a difficulty of finding capital, are unwilling to provide, whilst rich companies most readily and cheerfully spare no expense which their own interest, as well as humanity towards the workpeople, prompt them to undergo. A perusal of

the evidence of the children will amply shew the severe pain which this manner of working inflicts, yet they endure it with great fortitude and resignation. Nevertheless this is no reason why the same means which the humanity and good sense of the larger companies prompt them to adopt should not be adopted by all. That the work can never be accomplished without suffering, there is too much reason to fear, but no means should be spared to render it the least possible." (Ibid., § 280 et seq. p. 35.)

James Pearce, twelve years of age:

"About a year and a half ago, I took to the girdle and chain; I do not like it; it hurts me; it rubs my skin off, I often feel pain. I have often had blisters on my side; but when I was more used to it, it would not blister, but it smarted very badly. The chain was made of the same stuff as the rope that goes down the pit. I crawled on hands and feet. I often knocked my back against the top of the pit, and it hurt it very sore. The legs ached very badly. When I came home at night I often sat down to rest me by the way, I was so tired. The work made me look much older than I was. I worked at this drawing with girdle and chain three or four months. I thought that if I kept at this work I should be nothing at all, and I went and worked upon the bank. Many boys draw with girdle and chain now. There is not the railway and the dans. It is like drawing on the roads. I think it is a great hurt to a boy: it must be, to draw the same as a horse draws. A great many boys find that they are unable, and give over drawing with girdle and chain. It is very hard—very hard, sir. If they were to lay down rails, and push the coals on dans, it would be very convenient for the boys, though the expense might not be convenient for the masters." (App. Pt. I., p. 84.)

Thomas Hale, between fourteen and fifteen years of age:

"I now draw a dan, with a girdle and chain. I do not like it at all: it is hard work. I have marks on my side: it was cut by the girdle. The work is too low for dans: it is only three-quarters high. I never saw any dans pushed; that would be a deal better." (Ibid., p. 83.)

Isaac Tipton, sixteen years of age:

"I next went to draw with the girdle and chain. I had a girdle round the middle, and a chain under my legs; it was very hard work. If I had a bit of time in the pit I laid myself down on my back. We had no time unless something was the matter with the engine. Long before night we were so tired that we could hardly walk home sometimes. The girdle often makes blisters. I have had pieces like shillings and half-crowns, with the skin cocking up, all full of water, and when I put on the girdle the blisters would break and the girdle would stick, and next day they would fill again. These blisters give very great pain. There is no railway in the pits in which they use the girdle and chain. In all the pits about this part they use the girdle and chain." (Ibid., p. 84.)

.. Robert North:

"I went into the pit at seven years of age to assist to fill the skips. We cannot stop at what work we like; we are shifted. I drew about twelve months. When I drew by the girdle and chain the skin was broken, and the blood ran down. I durst not say anything. If we said anything, they, the butty, and the reeve who works under him, would take a stick and beat us. Men could not do the work, and they compelled us. I have seen lads of nine drawing with the girdle and chain. I have seen many draw at six; but they were not able to draw the full day out. If they are put to do the work they must do it or be beat." (Ibid., p. 85.)

The following statement of the actual work done in some of the collieries visited, will give a good idea of the average amount of a hurrier's day's work, as far as mere hurrying goes. In one of Mr. Clark's collieries, at Silkstone, where horses are used; the average distance to be hurried each way is 150 yards; the loaded corves weigh 8 cwt., (coal and corf together,) and the average day's work is 20 full corves per day. This, both ways, gives an aggregate distance of about three miles and a half per day, half of which distance will be performed pushing 8 cwt. on the descent, and half pushing about 2 cwt. on the ascent. In Messrs. Traviss and Horsfall's colliery at Worsboro', where no horses are employed, the average distance is 400 yards, the weight of loaded corves 8½ cwt., and the number hurried per day 20; making an aggregate distance of above nine miles. The same statement was made at Messrs. Hopwood and Jackson's

colliery, Barnsley, except that the corves weigh there $1\frac{1}{2}$ cwt. less. At Messrs. Thorpe's colliery, at Gawber, where horses are employed, the largest corves in the district are used; they weigh, when full, $12\frac{1}{2}$ cwt.; the average journey is 150 yards, and it is made 16 times a-day; giving an aggregate distance of only two miles and two-thirds. In one of the thin coal pits at Hunshelf Bank, where the corves weigh about 2 cwt. when full, the distance is about 140 yards, and they have 24 to hurry in the day; making a distance of nearly four miles per day.

Henry Briggs, Esq., one of the proprietors of Messrs. Stansfield and Briggs' coal mines, Flockton, says—

“The children will hurry themselves a month or two after they come into the pits. The children will have to hurry up hill with loaded corves about one quarter, or rather less, of the whole of the gates, and then they push with their heads. The inclination is one in twenty, and sometimes not so much. The gates vary from 4 feet to 30 inches in height. The children are employed by the men, except the drivers of ponies; the children generally help to fill about here; they help a little to get occasionally; they do this to learn. There are so many stoppages waiting for corves at the shaft, or the end of the horse-road, that they will amount to an hour and a half on the average for each child each day. The child sometimes riddles and sometimes fills. The hurriers will hurry 30 corves a-day backwards and forwards, the average distance being about 10,000 yards a-day; this is where there are no horses; where there are horses, the distance will be about 5000 yards, and the work of the hurriers is far less where there are horses.” (Append., Pt. I.)

We have, in a former chapter, stated that girls, in some pits, perform all the various offices of trapping, hurrying, filling, riddling, topping, and occasionally getting (coal); just as they are performed by boys.

In England, exclusive of Wales, it is only in some of the colliery districts of Yorkshire and Lancashire that female children of tender age and young and adult women are allowed to descend into the coal mines and regularly to perform the same kinds of underground work, and to work for the same number of hours, as boys and men; but in the East of Scotland their employment in the pits is general; and in South Wales it is not uncommon.

In one of the collieries, at Barnsley, where the coal is nine feet thick, a girl of eighteen, (Eliza Eggley,) was found hurrying corves, weighing $12\frac{1}{2}$ cwt. when loaded, and filling them with coals at the bank face of immense weight. She had to hurry 16 of these full corves a day, and back, a distance of 150 yards each way, and also to help in filling them.

Mr. Symonds states that—

“Instances of oppressively hard work performed by young females presented themselves at collieries near Barnsley. The evidence of Elizabeth Day, and of Ann and Elizabeth Eggley, is deserving of especial notice, the more so because both gave their evidence with much good feeling and propriety. The work of Elizabeth Day is rendered more severe by her having to hurry part of the way up hill with loaded corves, a very unusual circumstance. The Eggleys are, however, doing the ordinary work of hurriers in their colliery. It is a large, well-ventilated, and well-regulated one, but owing to the size of the corves, which weigh $12\frac{1}{2}$ cwt., it is work very far beyond the strength of females at any age, especially females of sixteen and eighteen years old.” After taking the evidence of the two Eggleys, Mr. Symonds saw them both at their work, and hurried their corves, and also performed the work they had to do at the bank-faces. “I can not only corroborate their statements,” says he, “but have no hesitation in adding, that were they galley-slaves their work could not be more oppressive, and, I believe, would not, in all probability, be so much so. Elizabeth Eggley, the younger, who is not above fifteen, whilst doing what is called topping the corves, lifted a coal which must have weighed at least a hundred pounds: it measured 30 inches in length, and 10 by 7 in thickness. This she lifted from the ground and placed on the top of the corve, above three feet and a half high. She afterwards lifted a still larger one, which was probably done to shew what she could do. The former one was lifted in the

ordinary course of her work. This girl was working for her father, who was standing by at the time." (App., Pt. I., p. 182.)

Elizabeth Day, aged seventeen, working in Messrs. Hopwood's pit at Barnsley :

" I have been nearly nine years in the pit. I trapped for two years when I first went, and have hurried ever since. I have hurried for my father until a year ago. I have to help to riddle and fill, and sometimes I have to fill by myself. It is very hard work for me at present. I have to hurry by myself. I have hurried by myself going fast on three years. Before then I had my sister to hurry with me. I have to hurry up hill with the loaded corves, quite as much up as down, but not many have to hurry up hill with the loaded corves. When I riddle I hold the riddle, and have to shake the slack out of it, and then I throw the rest into the corf. We always hurry in trousers, as you saw us to-day when you were in the pit. Generally I work naked down to the waist, like the rest. I had my shift on to-day when I saw you, because I had had to wait, and was cold; but generally the girls hurry naked down to the waist. It is very hard work for us all; it is harder work than we ought to do a deal. I have been lamed in my ankle, and strained in my back; it caused a great lump to rise in my ankle-bone once." (App., Pt. I., p. 244.)

Ann Eggley, hurrier in Messrs. Thorpe's colliery, eighteen years old :

" I hurry by myself, and have done so for long. I know the corves are very heavy; they are the biggest corves anywhere about. The work is far too hard for me; the sweat runs off me all over sometimes. I am very tired at night. Sometimes, when we get home at night, we have not power to wash us, and then we go to bed. Sometimes we fall asleep in the chair. Father said last night it was both a shame and a disgrace for girls to work as we do, but there was nought else for us to do. I have tried to get winding to do, but could not. I begun to hurry when I was seven, and I have been hurrying ever since. I have been eleven years in the pit. The girls are always tired. I was poorly twice this winter; it was with headache. I hurry for Robert Wiggins; he is not akin to me; I riddle for him. We all riddle for them except the littlest, when there is two. I am quite sure that we work constantly twelve hours, except on Saturdays. We wear trousers and our shifts in the pit, and great big shoes clinkered and nailed." (Ibid., p. 252.)

Elizabeth Eggley, sixteen years old :

" I am sister to the last witness. I hurry in the same pit, and work for my father. I find my work very much too hard for me. I hurry alone; it tires me in my arms and back most. We go to work between four and five in the morning; if we are not there by half-past five, we are not allowed to go down at all. We come out at four, five, or six at night, as it happens. We stop in generally twelve hours, and sometimes longer. We have to hurry only from the bank-face down to the horse-gate and back. I am sure it is very hard work, and tires us very much; it is too hard for girls to do. We sometimes go to sleep before we get to bed." (Ibid., p. 252.)

James Eggley, aged forty-five, same pit as the above :

" I have six girls, and only one young boy, not old enough to come to the pit. I cannot do without sending my girls to the pit; the eldest is eighteen, and the second sixteen; they each hurry alone; it is hard work for them, to be sure, but mine looks well with it. They do complain of being tired sometimes. I don't like their coming down, but I have had one (Ann) at home, and I cannot get any work for her to do; though I can get nothing, I have tried it. She brings me in 10s. per week, and it is a hard thing to lose it." (Ibid., p. 256.)

In the coal mines, in which the seams of coal are thin, the children almost universally hurry on all-fours with the belt and chain.

In some parts, girls are quite as commonly employed in dragging coals in this manner as boys. "They hurry with a belt and chain, as well as thrust," says Mr. Thomas Peace. "There are as many girls as boys employed about here." (Ibid., p. 233.) "One of the most disgusting sights I have ever seen," says the Sub-Commissioner, "was that of young females, dressed like boys in trousers, crawling on all-fours, with belts round their waists, and chains passing between their legs, at day pits at Huusshelf Bank, and in many small pits near Holmfirth and New Mills. It exists also in several other places."

"Whilst I was in the Huusshelf pit, the Rev. Mr. Bruce, of Wadsley, and the Rev. Mr. Nelson, of Rotherham, who accompanied me, and remained outside, saw another girl of ten years of age, also dressed in boy's clothes, who was employed in 'hurrying,' and these gentlemen saw her at work: she was a nice-looking little child, but of course as black as a tinker, and with a little necklace round her throat. These children have 24 corves a-day

to hurry out of this den, and consequently have 48 times to pass along the gate, which is about the size of a tolerably large drain. In two pits in the Huddersfield Union I have seen the same sight. The chain, passing high up between the legs of two of these girls, had worn large holes in their trousers, and any sight more disgustingly indecent or revolting can scarcely be imagined than these girls at work; no brothel can beat it. I took their evidence afterwards, when they were sent to me washed and dressed, and one of them, at least, was evidently crammed with her evidence." (J. C. Symons, Esq., App. Pt. I., p. 181.)

Figures are given in the Report of the sub-commissioner, illustrating two efficient modes in which the loaded wagons are propelled in the seams of coal, this work being performed indiscriminately by girls and boys, and young women and young men. In the thinner seams much younger children are employed. Opposite are three young children hurrying or drawing a loaded wagon of coals. The child in front 'is harnessed by his belt or chain to the wagon; the two boys behind are assisting in pushing it forward. Their heads, it will be observed, are brought down to a level with the wagon, and the body almost in a horizontal position. This is done partly to avoid striking the roof, and partly to gain the advantage of the muscular action, which is greatest in that position. It will be observed, the boy in front goes on his hands and feet; in that manner the whole weight of his body is in fact supported by the chain attached to the wagon and his feet, and consequently his power of drawing is greater than it would be if he crawled on his knees. These boys, by constantly pushing against the wagons, occasionally rub off the hair from the crowns of their heads so much, as to make them almost bald. (Appendix II. pp. 164, 165.)

In Durham and Northumberland, the 'putters' are divided into classes. 1. If one lad puts a tram by himself, he is called a 'tram.' 2. If an old and strong boy, and a young boy together, put a tram, the older boy is called a 'headsman,' and the younger boy a 'foal.' The headsman pays the foal 4*d.* out of every shilling, retaining the 8*d.* for himself. The foal is a servant of the master. 3. If two boys of about equal age and strength together put a tram, they are called 'half-marrows,' and they divide their earnings equally. All these putters are bound to work for twelve hours, and very rarely exceed that time. (App. Pt. I., p. 86.)

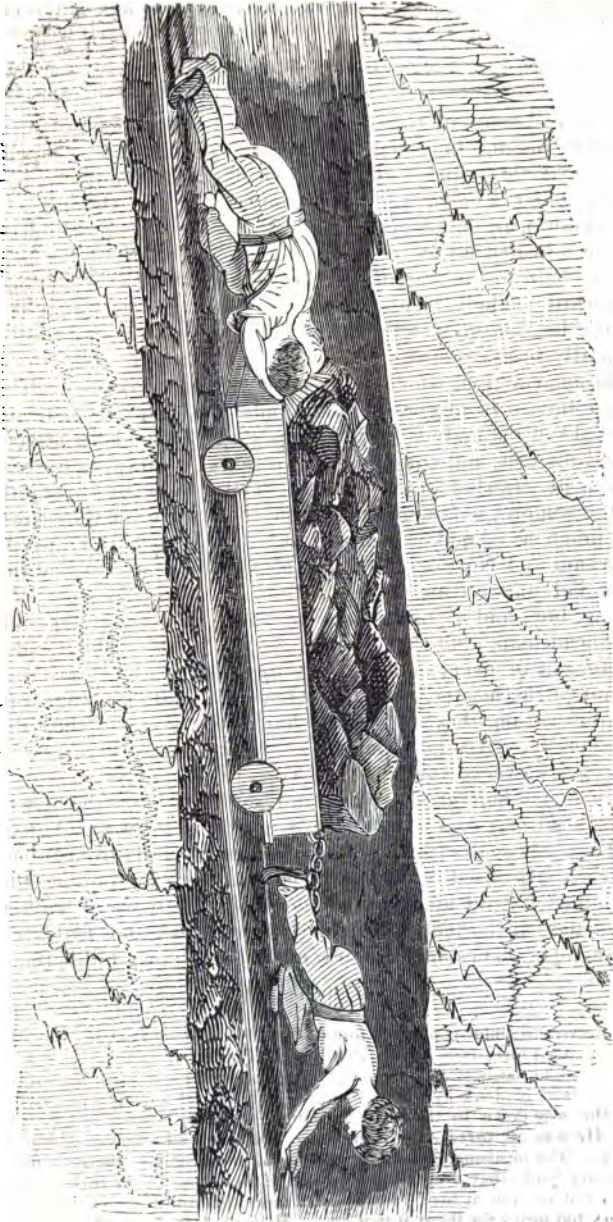
Headsmen go behind the tram, and push it from the hewers to the crane. A headsman and a half-marrow make up a tram. A foal assists a putter. The foals pull with the soams [a pair of cords from 2 feet 9 inches to 3 feet in length, used by foals and half-marrows for pulling the trams], and sometimes are put upon by the older boys. A lump of leather is sowed on to the backs of the jackets of the half-marrows and foals, because the corf runs against them sometimes when it is going down hill. (Ibid. p. 582.)

George Johnson, Esq., viewer of Willington, Heaton, and Burdon Main Collieries, on the Tyne, says:

"Every nerve and sinew is put into motion in helping up and putting." (Ibid. p. 567.)

Luke Gray, aged forty-two, hewer, Percy Main Colliery:

"Is a hewer, and has been for 22 years. The labour is too hard for the foal. Many times the skin is off his back by the corf rubbing it off. Last fortnight his back was skinned almost all the way down by the corf crouching [or falling] upon him, by getting off the tramway. He was off three days from this. He wears a back-skin of leather. All the foals do here. The headsman is behind, putting his hand against the roof and against the side. In heavy banks they drag all four wheels of the tram. Very little boys, of twelve or thirteen years of age, put as foals. Foals suffer more than other boys. They are too young, and the work too heavy for them at that age. Men have to leave the colliery sometimes, because their boys are put too young to this work. These boys are wanted, and must be had. They have great need for boys. The extremity of labour is greatest for foals of any boys. The low-seam boys can travel bent very nearly double. They go nearly bent double in walking in general. Has seen boys crying in this office because they were bound to be foals." (Ibid. p. 584.)



In the east of Scotland, as it has already been incidentally intimated, the method of carrying the coal is different, although, as in many other districts, males and females are indifferently employed in the severe labour it involves. Indeed, it is stated by Mr. Franks, to be a general rule, that girls are invariably set at an earlier age than boys to their peculiar labour, from a notion very generally entertained amongst the parents, that girls are more acute and capable of making themselves useful at an earlier age than boys." (App. Pt. I., p. 388.)

The persons employed in coal-bearing are almost always girls and women. Boys are sometimes engaged in the same labour, but that is comparatively rare. The coal-bearers have to carry coal on their backs in unrailed roads with burdens varying from $\frac{1}{2}$ cwt. to 3 cwt. The Sub-Commissioner represents this labour as "a cruel slaving, revolting to humanity," yet he found engaged in this labour a child, a beautiful girl, only six years old, whose age he ascertained, carrying in the pit $\frac{1}{2}$ cwt. of coals, and regularly making with this load fourteen long and toilsome journeys a-day.

Margaret Leveston, six years old, coal-bearer :

"Been down at coal-carrying six weeks; makes 10 to 14 rakes a-day; carries full 56 lbs. of coal in a wooden backit. The work is na guid; it is so very sair. I work with sister Jesse and mother; diinna ken the time we gang; it is gai dark." [A most interesting child, and perfectly beautiful. I ascertained her age to be six years, 24th May, 1840; she was registered at Inverness.]—R. H. Franks, Esq., App. Pt. i., p. 458.

William Burnside, ten years old, coal-bearer, same colliery :

"I gang with brother and sister; have done so two months. I can fill one tub in the day; it takes me 17 journeys, as my back gets sore. A tub holds near 5 cwt. I follow sister with bits of coal strapped over my head and back. The works fatigues me muckle."—*Ibid.*, p. 447.

Ellison Jack, a girl eleven years old, coal-bearer :

"I have been working below three years on my father's account; he takes me down at two in the morning, and I come up at one and two next afternoon. I go to bed at six at night to be ready for work next morning; the part of the pit I bear in the seams are much on the edge. I have to bear my burthen up four traps, or ladders, before I get to the main road which leads to the pit bottom. My task is four to five tubs; each tub holds $4\frac{1}{2}$ cwt. I fill five tubs in 20 journeys. I have had the strap when I did not do my bidding. Am very glad when my task is wrought, as it sore fatigues. (*Ibid.*, p. 446.)

A brief description of this child's place of work will better illustrate her evidence. She has first to descend a mine-ladder pit to the first rest, even to which a shaft is sunk, to draw up the baskets or tubs of coals filled by the bearers. She then takes her creel (a basket formed to the back, not unlike a cockle-shell flattened towards the neck, so as to allow lumps of coal to rest on the back of the neck and shoulders), and pursues her journey to the wall-face, or as it is called here, the room of work. She then lays down her basket, into which the coal is rolled, and it is frequently more than one man can do to lift the burden on her back. The tugs, or straps, are placed over the forehead, and the body bent in a semicircular form, in order to stiffen the arch. Large lumps of coal are then placed on the neck, and she then commences her journey with her burden to the pit bottom, first hanging her lamp to the cloth crossing her head. In this girl's case she has first to travel about 14 fathoms (84 feet) from the wall-face to the first ladder, which is 18 feet high; leaving the first ladder, she proceeds along the main road, probably 3 feet 6 inches to 4 feet 6 inches high, to the second ladder, 18 feet high, so on to the third and fourth ladders, till she reaches the pit bottom, where she casts her load, varying from 1 cwt. to $1\frac{1}{2}$ cwt., into the tub. This one journey is designated a rake; the height ascended, and the distance along the roads added together exceed the height of St. Paul's Cathedral; and it not unfrequently happens that the tugs break, and the load

falls upon those females who are following. "However incredible it may be," says Mr. Franks, "yet I have taken the evidence of fathers who have ruptured themselves from straining to lift coal on their children's backs." (Ibid., p. 446.)

Janet Cumming, eleven years old, bears coals, and says:

"I gang with the women at five and come up at five at night; work *all night* on Fridays, and come away at twelve in the day. I carry the large bits of coal from the wall-face to the pit-bottom, and the small pieces, called chows, in a creel. The weight is usually a hundred-weight; does not know how many pounds there are in a hundred-weight, but it is some weight to carry; it takes three journeys to fill a tub of four hundred-weight. The distance varies, as the work is not always on the same wall; sometimes 150 fathoms, while 250 fathoms. The roof is very low; I have to bend my back and legs, and the water comes frequently up to the calves of my legs. Has no liking for the work; father makes me like it. Never got hurt, but often obliged to scramble out of the pit when bad air was in." (Ibid., p. 436.)

The following represents an older girl carrying coals.



Isabella Read, twelve years old:

"I am wrought with sister and brother; it is very sore work. Cannot say how many rakes, or journeys, I make from pit-bottom to wall-face and back, thinks about thirty or twenty-five on the average; distance varies from 100 to 250 fathoms. I carry a hundred-weight and a quarter on my back, and am frequently in water up to the calves of my legs. When first down, fell frequently asleep while waiting for coal, from heat and fatigue. I do not like the work, nor do the lassies, but they are made to like it. When the weather is warm, there is difficulty in breathing, and frequently the lights go out." (Ibid., p. 439)

Agnes Kerr, fifteen years old, coal-bearer, Dryden Colliery:

"Was nine years old when commenced carrying coals; carry father's coal; make eighteen to twenty journeys a-day; a journey to and fro is about 200 to 250 fathoms; have to ascend and descend many ladders; can carry 1½ cwt." (Ibid., p. 448.)

Mary Duncan, sixteen years of age, coal-bearer :

"Began to carry coals when twelve years old. Do not like the work, nor do the other women, many of whom have wrought from eight years of age, and know no other. My employment is carrying coals from wall-face to the daylight, up the stair-pit. I make forty to fifty journeys a-day, and can carry 2 cwt. as my burthen. Some females carry 2½ to 3 cwt., but it is overstraining." (Ibid., p. 464.)

Agnes Moffatt, seventeen years of age :

"Began working at ten years of age. Works twelve and fourteen hours daily. Father took sister and I down; he gets our wages. I fill five baskets; the weight is more than 22 cwt.; it takes me five journeys. The work is o'er sair for females. Had my shoulder knocked out a short time ago, and laid idle some time. It is no uncommon thing for women to lose their burthen [load], and drop off the ladder down the dyke below. Margaret M'Neil did a few weeks since, and injured both legs. When the tugs which pass over the forehead break, which they frequently do, it is very dangerous to be under a load. The lassies hate the work altogether, but they canna run away from it." (Ibid., p. 440.)

Jane Peacock Watson, aged forty, coal-bearer, Bearing Pits, Harlow Muir, Coaly Burn, Peebleshire :

"I have wrought in the bowels of the earth thirty-three years. Have been married twenty-three years, and had nine children; six are alive, three died of typhus a few years since; have had two dead born; thinks they were so from the oppressive work. A vast of women have dead children, and false births, which are worse, as they are not able to work after." (Ibid., p. 458.)

William Hunter, mining oversman, Arniston Colliery :

"I have been twenty years in the works of Robert Dundas, Esq., and had much experience in the manner of drawing coal, as well as the habits and practices of the collier people. Until the last eight months, women and lassies were brought below in these works, when Mr. Alexander Maxton, our manager, issued an order to exclude them from going below, having some months prior given intimation of the same. Women always did the lifting, or heavy part of the work, and neither they nor the children were treated like human beings; nor are they, where they are employed. Females submit to work in places where no man, or even lad, could be got to labour in; they work in bad roads, up to their knees in water, in a posture nearly double; they are below till last hour of pregnancy; they have swelled haunches and aukles, and are prematurely brought to the grave, or, what is worse, a lingering existence. Many of the daughters of the miners are now at respectable service. I have two who are in families at Leith, and who are much delighted with the change." (Ibid., p. 453.)

Robert Bald, Esq., the eminent coal-viewer, states, that—

"In surveying the workings of an extensive colliery under ground, a married woman came forward, groaning under an excessive weight of coals, trembling in every nerve, and almost unable to keep her knees from sinking under her. On coming up she said, in a plaintive and melancholy voice, 'Oh, sir, this is sore, sore, sore work! I wish to God that the first woman who tried to bear coals had broke her back, and none would have tried it again!' (App., Pt. I., p. 387, note.)

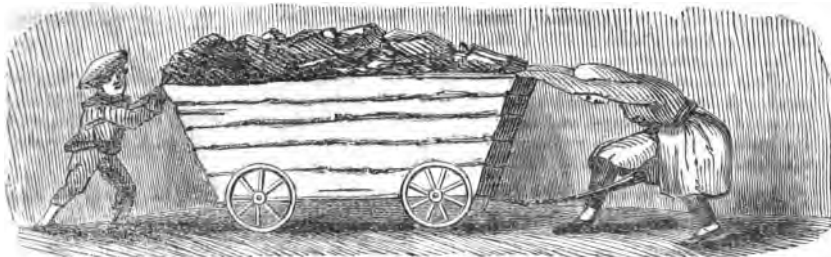
At the conclusion of his account of this employment. Mr. Franks says : "When the nature of this horrible labour is taken into consideration, its extreme severity, its regular duration of from twelve to fourteen hours daily, which, once a-week at least, is extended through the whole of the night; the damp, heated, and unwholesome atmosphere in which the work is carried on; the tender age and sex of the workers; when it is considered that



such labour is performed, not in isolated instances selected to excite compassion, but that it may be truly regarded as the type of the everyday existence of hundreds of our fellow-creatures—a picture is presented of deadly physical oppression and systematic slavery, of which I conscientiously believe no one unacquainted with such facts would credit the existence in the British dominions." (Ibid., p. 387.)

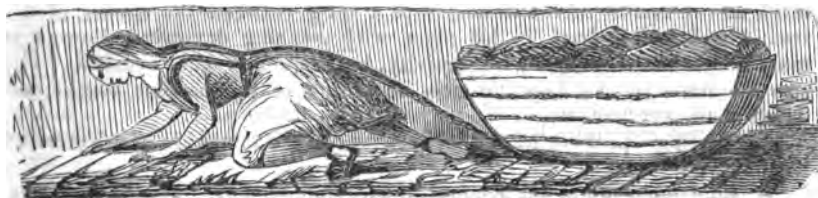
The labour in which children and young persons are employed in this district, next in severity to the sore slavery of coal-bearing, is coal-putting, in which we find the sexes more equally distributed. Putters drag or push the carts containing coal from the coal-wall to the pit-bottom; weight varying from three to ten hundred-weight.

The following represents the mode of putting backwards with the face to the tub.



The boxes or carriages employed in putting are of two sorts, the hutchie and the slype; the hutchie being an oblong square-sided box with four wheels, which usually runs on a rail; and the slype is a wood-framed box, curved and shod with iron at the bottom, holding from 2½ to 5 cwt. of coal, adapted to the seams through which it is dragged. The lad or lass is harnessed over the shoulders and back with a strong leathern girth, which behind is furnished with an iron hook, which attaches itself to a chain fastened to the coal-cart or slype, and is thus dragged along. The dresses of these girls are made of coarse hempen stuff, (sacking), fitting close to the figure, the coverings to their heads are of the same material; little or no flannel is used, and their clothing, being of an absorbent nature, frequently gets completely saturated shortly after descending the pit, especially where the roofs are soft.

Where the seams are narrow and the roofs low, children and young persons of both sexes drag on all-fours, like horses. The workings in these



narrow seams are from 100 to 200 yards from the main-roads, and the passages through which they have to crawl with their loads do not exceed from twenty-two to twenty-eight inches in height. "The danger and the difficulties," observes Mr. Franks, "of dragging on roads, dipping from

one foot in three to one foot in six, may be more easily conceived than explained; and the state which females are in after pulling like horses through these holes—their perspiration, their exhaustion, and very frequently even their tears, it is painful in the extreme to witness; yet, when the work is done, they return to it with a vigour which is surprising, considering how they inwardly hate it.” (App., Pt. I., p. 388.)

Of the severity of the labour performed by young women in these pits, the account of her work given by Margaret Hipps, seventeen years old, putter, Stoney Rigg Colliery, Stirlingshire, may serve as an example.*

“ My employment, after reaching the wall-face, is to fill a bagie, or slype, with 2½ to 3 cwt. of coal. I then hook it on to my chain, and drag it through the seam, which is twenty-six to twenty-eight inches high, till I get to the main-road—a good distance, probably 200 to 400 yards. The pavement I drag over is wet, and I am obliged at all times to crawl on hands and feet with my bagie hung to the chain and ropes. It is sad sweating and sore fatiguing work, and frequently maims the women.” (R. H. Franks, Esq., Evidence, No. 239: App., Pt. I., p. 479, l. 50.)

Sub-Commissioner:

“ It is almost incredible that human beings can submit to such employment, crawling on hands and knees, harnessed like horses, over soft slushy floors more difficult than dragging the same weights through our lowest common-sewers, and more difficult in consequence of the inclination, which is frequently one in three to one in six.” (Ibid., l. 61. See also witnesses, Nos. 102, 231, 236, 262, 362.)

Another form of severe labour, to which children of eight years of age and upwards are put, is that of pumping water in the pits.

Alexander Gray, ten years old, below-ground pump-boy, New Craighall Colliery, Inveresk:

“ I pump out the water in the under bottom of the pit, to keep the men's rooms dry. I am obliged to pump fast, or the water would cover me. I had to run away a few weeks ago, as the water came up so fast that I could not pump at all, and the men were obliged to gang. The water frequently covers my legs, and those of the men when they sit to pick. I have been two years at the pump. I work every day, whether men work or not: no holidays but Sabbath. I go down at three, sometimes five, in the morning; and come up at six and seven at night. I know that I work twelve and fourteen hours, as I can tell by the clock.” (Ibid., p. 449.)

Janet Murdoch, twelve years old, pumper:

“ I have wrought in the mines four months. My present employment is to bucket the water and lift [carry] to level face; the work is constant and most wearying, as the place is low I lift in, not being four feet high.” (Ibid., p. 481.)

The duty of the horse-driver, or haulier, is to drive the horse and tram, or carriage, from the wall-face, where the colliers are picking the coal, to the mouth of the level. He has to look after his horse, feed him in the day, and take him home at night; his occupation requires great agility in the narrow and low-roofed roads; sometimes he is required to stop his tram suddenly—in an instant he is between the rail and the side of the level, and in almost total darkness slips a sprig between the spokes of his tram-wheel, and is back in his place with amazing dexterity; though it must be confessed, with all his activity, he frequently gets crushed. His size is a matter of some importance, according to the present height and width of the main roads.

Mr. Waring, speaking of the jockey-boys in the mines, in the Forest of Dean, says—

“ In this vocation, sits on the front edge of the foremost wagon, immediately behind the horse—a position of considerable danger, in case of a sudden jolt from a loose plate, or other cause; but accidents of this kind are so rare that I did not hear of a single case. In the collieries at Howlet's Slade I observed a commodious diekey, or movable seat, attached

* The engraving on the preceding page represents this girl at her work in a seam of coal.

to the front carriage by strong iron grappels, being readily unshipped and transferred to another wagon when required. This seat was devised for the safety of the boys, by the considerate managing proprietor, Mr. John Trotter Thomas, of Coleford. On the whole, I was most impressed with the ideas of danger to the heads of these young charioteers, from their almost constant proximity to the rugged roof of the mine; and so nicely did they adapt their posture to the space above them, that their woollen caps brushed a distinct line of transit along the moist surface of the rock, whenever it was low enough to touch them; shewing that another inch of elevation would have seriously endangered their skulls."

In Cumberland, the journeys along these tram-ways are greatly lengthened, owing to many of the large collieries being sub-marine. In the William Pit they have 500 acres under the sea, and the distance is two miles and a half from the shaft to the extreme part of the workings. There is a stable also under the sea in this immense pit for forty-five horses. A feature exists in this driving employment, and which constitutes the chief labour of the occupation. To prevent the baskets from running down hill and falling on the heels of the horses, it is customary for the driver to place himself as a post between the foremost basket and the buttock of the horse. He places the left shoulder against the horse, the right foot on the rail of the tram, and the right hand on the top of the basket; the left leg being generally supported by the trace. When the train of corves is heavily laden, or the descent very steep, a pole is placed through the hind wheels of the trams, and thus it is in a measure dragged. Nevertheless the work is very toilsome, and accidents sometimes occur by the foot slipping off, and getting struck by part of the wheel or axle. "The work strikes one as being palpably unnecessary, and as a barbarous preference of the human body for a mere mechanical process, in which shafts might be, and in some of the inland pits are, used instead. It was indeed stated by one witness, that the use of shafts would be very awkward for the purpose of turning at the foreheads. I believe a very little management would obviate this difficulty." (J. C. Symons, Esq., App., Pt. I. p. 299.)

There is a practice in Lancashire but little known in any other part of England—that of employing mere children to manage the engines by which the men as well as the coals are drawn out of the pit. The power of the steam-engine is applied directly, and in the simplest form, to this purpose; and upon the accurate stoppage of the engine, at the exact moment of their appearance at the surface, depends whether the men ascending shall not be wound over the pulley above, and dashed down the shaft again—an event which has here repeatedly occurred. (App., Pt. II. p. 823.)

Mr. John Ogden, chief agent to the Chamber Colliery Company:

"Young people are employed as engineers from twelve to twenty years of age."

Joseph Gott, aged fifty-three, and Richard Barker, aged forty-six, colliers, coal-mine near Rochdale:

"Children should not be employed so young as engineers; many a man has been killed by it." (Ibid., p. 850.)

John Gordon, aged thirty-five, and Edmund Stanley, aged thirty-four, miners in the employment of Mr. Abraham Lees, at Stoneywell Lane, near Oldham:

"Think that such young boys should not be entrusted, as engineers, with the lives of a lot of men, as they are; they are not 'stayable,' and no one under eighteen ought to be entrusted with such a job. This is a general opinion among the men themselves." (Ibid., p. 851.)

Cyrus Taylor, engineer at one of the Slibber Pits, going in thirteen:

"Is past thirteen, and has been five weeks, next Saturday, learning to be engineer at the Slibber Pits, of the company of Messrs Jones. Was working at the bottom, but got two fingers cut off [shewing the stumps on the left hand]. Winds men as well as coals. The proper engineer is Samuel Taylor, no relation of his, and who is somewhere about, mending wagons. Samuel Taylor always comes into the engine-house to be with him when he is winding men." (Ibid., p. 856.)

James Woods, engineer at one of the Hunt-lane Pits, going in sixteen :

"Has been an engineer about four years. Is now working at the Hunt-lane Collieries, at the Hor-lane Pit. Is busy at his work; is reckoned attentive; in winding, has wound over tubs of coals twice; has never wound over men, but was once appointed in place of a lad who wound over three men, and killed them: this was at the Trundley Pit, one of the Chamber-lane Pits, and about two years ago." (Ibid., p. 856.)

It appears that the same practice of employing children as engineers is not unknown in the west of Scotland:—"I was not a little surprised," says the Sub-Commissioner, "to find that the management of a high-pressure steam-engine, on the proper working of which many lives depend, was not unfrequently entrusted to a mere boy of from twelve to fourteen years of age. In general, indeed, his father was the pit-head man, and from his station could see and communicate with the lad, who acted entirely by his directions; but still it appeared to me a practice full of danger. It should be mentioned, that frequently the drainage of the Scotch collieries is all pumped up at one pit, whilst coals and men are raised by small engines for this purpose alone at distinct pits; consequently, every hutch which is raised or lowered requires the engine to be twice stopped to allow of its being hooked on and off, and if this is not done according to the signals given by the pit-head man and bot-tomer, serious accidents might occur. It is also necessary, when men are going up and down, to moderate the speed at which the engine works, otherwise they would run the risk of being dashed against the rocky sides of the shaft. The bot-tomer consequently always calls out, 'Men on!' when men are coming up, and it is the duty of the engine manager to regulate the speed accordingly. If, too, the engine does not stop at the proper moment, the men might be hoisted up and dashed against the pit-head frame, which has sometimes happened. All this requires vigilance and care on the part of the engineer, which can hardly be expected of a boy so young as many employed as such."

CHAPTER IV.

OF THE TREATMENT AND PHYSICAL CONDITION OF THE PERSONS EMPLOYED IN COAL MINES.

I. HOURS OF LABOUR.

THE first thing that suggests itself to the mind, in considering the treatment of the unfortunate beings doomed to labour in these gloomy receptacles of suffering and crime, is, next to the age at which they are sent into them, the hours during which they are kept at work upon a stretch.

The hours of work vary considerably in different districts, but universally where there are air-doors to be kept, the youngest children descend into the pits with the first and ascend with the last set of workpeople.

Generally speaking, the hours of labour vary from eleven to thirteen hours, with, in some places, an hour, or nearly so, taken out of the time for meals. There are, however, extreme variations from this length of the working day, in opposite directions. In the Forest of Dean, South Gloucestershire, North Somersetshire, and some parts of Ireland, there are many pits in which a day's work is completed in from eight to ten hours; while in Scotland, and the west, the labour of the pit is often protracted to from fifteen to eighteen hours; as it is also in Derbyshire. The thin pits generally work the shortest time, owing to the oppressive nature of the labour. Excesses, of course, occur, and appear to be by no means un-frequent.

In the fearful abuse of protracted hours of work, there seems to be no comparison between Wales, Lancashire, Yorkshire, and Northumberland.

"It will be noticed (says Mr. Leifchild) how frequently the boys state that they have remained in the pits for twenty-four and thirty-six consecutive hours, and even forty-eight hours. These statements were too numerous to be disputable, and were often fully con-

firmed by the evidence of separate witnesses. The frequency of the fact is surprising. A witness asserted his knowledge of an instance in which a boy had, eight years previously, remained an entire week in a pit in the Teas district; but there were no means of confirming this statement."

Evidence, such as the following, occurs frequently in Mr. Leifchild's Report:—

"George Foster has wrought a double shift of twenty-four hours three times in the Benton pit. About a year and a half ago he wrought three shifts at one time, going down at four o'clock one morning, and staying thirty-six hours without coming up. The overman asked him to stop, &c.—George Kendall, two or three times has stood thirty-six hours down the pit. When lads say they stop double shift, they mean generally thirty-six hours. If, for instance, they are in the day shift, and are asked to stop for the night shift, then they stay their own shift for next day;—their baits (meals) being sent down to them. *A great quantity of boys are doing this now, from a scarcity of boys.* * * Some lads have worked double shift (thirty-six hours) lately. John Clough, aged fourteen, worked thirty-six hours down, last Friday. (His brother confirms this.) George Short, has always been drowsy since he went there. Twice he has worked three shifts following, of twelve hours each shift, about three years ago. They had no lads, and he was forced to do it; and he was wanted to drive and 'put' coals. Never came up at all during the thirty-six hours; was sleepy, but had no time to sleep. * * His head 'swells' very often, and he feels sickish sometimes, and drowsy sometimes, especially if he sits down." [This boy's work is hoisting a crane for 1s. 6d. per day.]

The work thus cruelly protracted, consists not, be it observed, of tending self-acting machinery or mending broken threads, as in the cotton mills, where the 12 hours labour of youths under eighteen years old excites so much compassion, but of the heaviest species of manual and bodily fatigue, in pushing loaded coal wagons, in lifting heavy weights, or in driving and constantly righting trains of loaded corves as they get jerked off the tramways.

We must again let some of these poor sufferers speak for themselves. All classes of witnesses concur in stating that in Derbyshire some of the children and young persons work sixteen hours out of the twenty-four, reckoning from the time they leave their home in the morning, until they return to it in the evening:

John Hawkins, eight years of age:

"Has worked in Sissons Pit a year and a half; lives a mile from the pit; goes down from five to nine;" that is, this child, eight years old, is employed in the pit at work from five o'clock in the morning to nine at night, a period of sixteen hours. (App., Pt. II., p. 293.)

Ephraim Riley, eleven years old:

"Had three miles to walk to the pit; left home at five o'clock, winter and summer, and did not get home again till nine o'clock at night (16 hours); his legs and thighs hurt him so, with working so much, that he remains in bed on Sunday mornings." (Ibid., p. 271.)

John Chambers, thirteen years old:

"Has worked in pits since he was seven; works from six to nine or ten (from 15 to 16 hours.) When first he worked in a pit he felt so tired, and his legs, arms, and back ached so much, that his brother has had to help him home many times. He could not go to school on a Sunday morning, he has been so stiff; he felt these pains until about a year since; he now feels tired, but his limbs do not ache as they did." (Ibid., p. 271.)

These statements of the children and young persons are confirmed by the evidence of the adults.

John Beasley:

"The boys go down at six in the morning, and has known them kept down until nine or ten, 'until they are almost ready to exhaust;' the children and young persons work the same hours as the men." (Ibid., p. 274.)

John Fisher:

"They go down at six, and come up between eight and nine; it has been ten before they get home, about a quarter of a mile distant." (Ibid., p. 304.)

Benjamin Fletcher, coal-agent or ground-bailiff to Francis Newdigate, Esq., West Hallam Coal-works, says:

"They are let down from six to eight. He has gone at three o'clock in the morning and worked until ten; he has many and many a time fallen asleep as he was going to work in the morning, and fell into the ditches, owing to a want of sleep." (*Ibid.*, p. 276.)

Several parents give similar evidence;—for instance, Ellen Wagstaff, who says she has five children variously employed; the youngest was not seven years old when he first went to the pits. The whole have worked since they were seven, or seven and a half; they have worked from six to eight; from six to two for half days; she has known them when at full work so tired when they first worked that you could not hear them speak, and they fell asleep before they could eat their suppers; it has grieved her to the heart to see them.

II. NIGHT-WORK.

In the great majority of the coal fields of the United Kingdom night-work is a part of the ordinary system of colliery labour; the extent to which it is used, and the constancy with which it is practised, being regulated entirely by the demand for coals. There are a few districts, however, in the coal mines in which there is no night-work, properly so called—that is, none beyond what is absolutely necessary to repair the pit, and to put it in order for working during the day. In most of Lord Lonsdale's extensive collieries in Cumberland, they work night and day; the shift who work the twelve day-hours one week working the twelve night-hours the succeeding week, and so on alternately.

"The appearance of the adults in these collieries," says the sub-commissioner, "was remarkably pallid and emaciated. I should attribute this greatly to the system of night-working; and there is a probability that the change from night to day hours operates more unfavourably on the health than it would do were they to work altogether at night. In the latter case, habit becomes second nature, and sleep as refreshing is obtained by day as by night. Not so when the animal system is subjected to continual change, no habit is formed; and, according to the evidence, the rest obtained in the day is very deficient; so much so as to render the night-work irksome through the inclination for sleep. The wife generally goes to bed by day with her husband, and so do all the family; and the door is often fastened to preserve as much quiet as possible." (*J. C. Symons, Esq., App., Pt. I. p. 300.*)

The coal fields in which there is no night-work, properly so called—that is, none beyond what is necessary to maintain the colliery in working order, are, South and North Staffordshire, Shropshire, Leicestershire, the greater portion of the West Riding of Yorkshire, West of Scotland, and North Somersetshire. (See *Dr. Mitchell, Report and Evidence; J. C. Symons, Esq., and S. S. Scriven, Esq., Reports and Evidence; and Reports by T. Tancred, Esq., and by Dr. Stewart.*)

III. TIMES AND MODES OF TAKING FOOD.

Of all the coal districts of Great Britain there are only two in which any regular time is usually set apart for the rest and refreshment of the work people during the day, and in which it is the general custom to observe the time so fixed strictly and uniformly. The districts thus distinguished, and in the mines of which there are not only nominal meal hours, but there is really a cessation of work during the stated time, are those of South Staffordshire and the Forest of Dean. South Staffordshire is also the only district in the United Kingdom in the coal mines of which, as far as appears from the evidence, any place is provided for the accommodation of the work people during their meal hours; and this is below ground. In the few coal mines of Ireland hours are set aside for meals, and the hands employed in some

of them ascend from the pits to take their food. There are several districts in which the work people are nominally allowed a fixed time for meals—namely, those of Warwickshire, Ashby-de-la-Zouch, Derbyshire, Yorkshire, and Lancashire. In some of the coal mines in each of these districts, the full time thus nominally allowed, is actually and uniformly taken, but these are comparatively few; and in all these districts the regular cessation of the work for any period during the working hours may be regarded as an exception to the general practice; while in the great majority of the coal districts of England, Scotland, and Wales, no regular time whatever is even nominally allowed for meals, but the people take what little food they eat during their long hours of labour when they best can catch a moment to swallow it. With very few exceptions, no time is allowed for breakfast in any of the districts, even in those in which the work commences very early in the morning, as early as five, four, or even three o'clock. It is almost the universal custom among the collier people to take a hasty morning meal before they leave their dwellings, and then to continue their labour without any further refreshment until about noon. There are exceptions to this, but they are rare.

There is no instance in the whole kingdom of rest from colliery labour for a single day, or even half a day, the wages going on during the cessation of the work; but in most districts nothing is done in the pits on some of the principal fasts and festivals; and in general the colliers have a considerable portion of idle time, because there is not a sufficient demand for their labour to occupy them every day in the week, winter and summer.

IV. TREATMENT OF CHILDREN.

The treatment of children and young persons employed in coal-mines, and the care taken of their health and safety, will be found to differ very materially in different districts, and in different collieries in the same district.

In the South Staffordshire, Shropshire, Warwickshire, and Leicestershire coal pits the main body of evidence shews that the children and young persons are not, in general, ill-used. The Sub-Commissioners state that they are so much in demand, being able to do many things which could not be done by grown men, on account of their size, that it is in their power to command good treatment. Still, however, even in these districts, there are not wanting cases of rough usage and severe punishment.

John Greaves, collier:

"Every boy has to clear away for two men, and if he do not do it they strap him. He dare not say much about it, for fear of their giving him more, and perhaps master turning him off. Most of the men wear a leather strap round them, which they can apply to the boys if need be. The boys are not used so bad as they were." (App., Part I., p. 67.)

Isaac Tipton, aged 16, Woombridge Collieries:

"The men did not thump me very often. I was not very bad, only midding. I sometimes deserved it because I would not do as they told me. They sometimes thumped me with the fist, and sometimes with the stick; they made marks; I seldom complained unless they gave it me too bad. The butties gave it me sometimes when I neglected to do what I was told. There was nobody to whom I could complain of the batties." (App., Part I., p. 88.)

In Derbyshire the treatment of the children is left entirely either to the butty or to the overlooker, the latter being invested by the master with the same power as the butty, who bargains for, dismisses, and uses the child

just as he pleases. With very few exceptions the proprietors and their agents take no charge whatever of the children, and neither know nor care how they are treated. Here is a sample of their treatment :—

Jacob Birkin, aged eight, Bagthorpe :

"The corporal often beats him, and Gibson has pinched his ears through as well as his brother's." (Ibid., App. II., p. 284.)

Joseph Latam, aged nine, Awsworth :

"No rewards; the butties sometimes use a stick as thick as a hedge-stake, and hit them over the legs and back, and bruise them; they kick them and pull their ears because they do not get the asses on sharp enough. Has known Jonathan Watts, a butty, beat a boy, named Jemmy Robinson, with his fist and stick, pull his ears, and kick him until Robinson's father was obliged to send him home. When the father complained, he was told the boy could not get the ass on, and no more notice was taken of it. Other boys have been shamefully used by this man; he struck a boy named Slater with his stick, the boy fell, and he then stamped on him until the boy could scarcely stand; he never told his masters; he said he should not, for he should be only served worse. Slater is near fifteen, Robinson is nearly as old." (Ibid., p. 308.)

Levi Bradby, aged ten, Kirkby Portland :

"Is sometimes beaten by the corporal with the ass-stick, and is pretty well marked; does not like working in pits, being so ill-used by the corporals." (Ibid., p. 310.)

John Bonsor, aged ten, Kirkby Portland :

"The corporal thrashes him; he lays on him with the ass-stick and wheals him; had rather drive plough, or go to school." (Ibid., p. 310.)

Thomas Birkin, aged ten, Bagthorpe :

"About half a year since, Thomas Gibson, the loader, nipped him with his nails until he cut quite through the ears; has often nipped his ears both before and since." (Ibid., p. 285.)

William Dostock, aged twelve, Babbington :

"Before I worked under his father, he was often beaten with sticks, had his ears and hair pulled, and coals thrown at him; as the men take all by the job, they use the lads most cruelly. He has heard what his brother has said, and it is true; he has never complained to his masters, but his mother has, until it is of no use, and boys who have complained to the magistrates have done no good, as the butties always take the part of the corporals." (Ibid., p. 301.)

James Robinson, aged fourteen, Awsworth :

"No rewards, but is often beaten by the corporal, Sam Meakin; he beat him last week so that he could not raise his arm; the stick was as thick as two fingers, and a knob at the end; he broke it over him; he was pushing the wagon, and Meakin's son lay in the road all his length, and he not seeing him, hurt his leg; he has beaten him before because he has not drawn the corve or started the asses; he has then whealed him all over; he told his father and mother; he had no time to complain to the masters, as the office is shut when they are out of the pits. He worked at Hunt's Pitt at Babbington, where he was so beaten that his father, on that account, took him away; the corporal there has kicked him when he was down, pulled his ears and hair, and threw coals at him; he dare not tell his masters then, or he believes the corporal would have killed him. His brothers, one ten, the other thirteen years old, now work at Hunt's, and are beaten until they can hardly get home, and dare not tell for fear of worse usage, and they and their father losing their work." (Ibid., p. 308.)

Ephraim Riley, aged fifteen, Ilkiston :

"He is punished with a stick as described by others, but in no other way; has known boys so abused. Henry Boskett, for instance, was kicked and knocked down, and so used that he was obliged altogether to leave the pit; it was the corporal that punished him; he was never called to account for his brutal conduct." (Ibid., p. 270.)

Joseph Aram, aged sixteen, Williamson's Soft Pit :

"There are no rewards; but they are often punished until they can scarcely stand. He has to draw as well as guide the corve by the belt; has often to draw hard when the asses tire, and they have to start them again. Has often had his hips ache and smart again when he got home, and it often galls him as the collar does a horse. He is not only punished with a stick, but his ears are pulled, as well as being kicked and bruised by the butties, and those who break the coal out. His brother was so beaten about three or four months since he dare not again go to the pit. He is only nine years old, and drives between; he gets so tired that he cannot get on, and then towards dinner-time, or the end of the day, the corporal thrashes him. They may swear, or use what language they please, and are never beat for that. His mother has complained to the masters, who always say they shall not be

served so, but they hear no more of it, and are used no better. On other grounds he believes the boys are not used so ill as at Babbington." (*Ibid.*, p. 303.)

John Bostock, aged seventeen, Babbington:

"They often get their ears pulled by the corporals, and sometimes they mark their backs; they used, when his father was not with him, to take the burning candlewicks, after the tallow was off, to grease the wheels, light them and burn his arms. His father works in the same pit, and he is now able to do his work, therefore is not so ill-used; he has known other lads used so at Ilkiston; he has known his uncle take a boy named William Wright by the ears and knock his head against the wall, because his eyesight was bad and he could not see to do his work so well as the others; he has complained to the butties, but they have always taken the part of the corporal; he has known one boy beaten until he was black and blue; he complained to Messrs. Potter's agent, who then told the butty he would turn him away, and since then the boy has been used better." (*Ibid.*, p. 301.)

Of the savage manner in which the children are sometimes treated, the following is an example at Oldham:—

Robert Tweedale, aged fourteen:

"The getter he thructed for was a wicked old fellow, named Charles Hill; once he bit him by the thigh, and lifted him to the roof in his mouth; many a time has he hit him on the side of his head. Worked with him a year, and has been with him four times over. He bit him because he had no strength to lift the tub on the rails when he came to them in the main-way. Because he could no' work with him 'gradely' [kindly], left him." (*Ibid.*, No. 12, p. 850, l. 16.)

Joseph Waring, aged ten, Cheeseden, in Lancashire, says—

"At Cheeseden he was badly used. Sometimes when he got his sticks wrong, Billy Bobby Yeates (the man he worked for) got him to the end of the run and beat him with the pick handle. Sometimes he got a stick to lick him with; the pick haum was the worst. Stayed half a year there, and then he got ill from being beat. Should not have been ill if he had not been beaten; he was beat because he had not strength to keep his turn; could not draw so much as the others." (*App.*, Part II., p. 812.)

William Forrest, aged fifteen and three-quarters:

"Sometimes when tired he would stop, and then he was always licked; never spoke before he licked him (with a strap); did sometimes speak first, and ask what he had been doing; sometimes they would hit us with a pick handle. When he was at George Yates's he was caught in the side with a pick handle by Joseph Eccles, and it knocked him over; he was sick and was obliged to be taken out of the pit; never went to work for three days." (*Ibid.*, p. 811.)—[Sub-commissioner—"Mr. Whalley, the relieving-officer, who was present, said that this and the preceding witness were so bad he did not think they would recover; it was owing to the ill-usage."]

William Holt, aged eighteen, Red Delf Pit, Over-Darwen, Blackburn:

"Has been beat with pick haum, hammer, and lumps of wood; never made any bruises; some as gets their legs broke with it, striking too hard, and (the striker) does not think of it; never see'd any, but has heard tell of it; has seen when they gotten an eye knocked out by whizzing stones at them. Does not beat his drawers yet; does not mean to. Some as is great ones does it to some as is not their own." (*Ibid.*, p. 813.)

These statements of the children and young persons as to the manner in which they are treated in the pits, are too fully confirmed by the evidence of adult workmen.

The *females* are subjected, in some districts, to the same cruel treatment.

The following, among other cases, are mentioned as occurring in the Halifax district:—

William Dyson, aged fourteen:

"I have seen her [his work-mate, Sarah Ambler] thrashed many times. When she does not please them, they rap her in the face, and knock her down. I repeat, I have seen this many times." (*App.* II., p. 103.)

Margaret Gornley, aged nine:

"They flog us down in the pit, sometimes with their hand upon my bottom, which hurts me very much. Thomas Copeland flogs me more than once in a day, which makes me cry." (*Ibid.*, p. 103.)

Harriet Craven, aged eleven:

"What made me cry when you came down was because Ibbotson had been braying

[beating] me; he dug a piece of coal as big as my head at me, and it struck me in my back." ["In the gate," says the sub-commissioner, "I met the deponent, Harriet Craven, crying very bitterly. She informed me her getter had been beating her very cruelly, because she was then about to leave her work (five o'clock) before she had hurried sufficiently for his purpose. Both herself and sister informed me that he was constantly in the habit of ill-treating them. The several marks upon their persons, which they shewed me, were sufficient proofs of it."] (Ibid., p. 123.)

The evidence collected in Cumberland, Durham, and Northumberland shews that the children and young persons are under the protection of the employers, and are in general well treated. In Scotland, Ireland, and Wales, they are also tolerably well treated, in general.

V. TREATMENT OF APPRENTICES.

There is one mode of engaging the labour of children and young persons in coal mines, peculiar to a few districts, which deserves particular notice—viz., that by apprenticeship, in consequence of the ill-usage to which they are in most cases subjected. It was formerly common in Shropshire, but has been abandoned. It is common in Yorkshire, Lancashire, and the west of Scotland, but is most in use in South Staffordshire.

These apprentices are paupers or orphans, and are wholly in the power of the butties; and, in South Staffordshire, such is the demand for this class of children by the butties, that there are scarcely any boys in the Union workhouses of Walsall, Wolverhampton, Dudley, and Stourbridge. They are sent on trial to the butties between the ages of eight and nine, and at nine are bound as apprentices for twelve years—that is, to the age of twenty-one years complete, although there is nothing whatever in the coal mines to learn beyond a little dexterity, readily acquired by short practice. Thus, the orphan, whom necessity has driven into a workhouse, is made to labour in the mines until the age of twenty-one, solely for the benefit of another. (Dr. Mitchell, Report, App. Pt. I., p. 19.)

The evidences of the cruel treatment of this unfortunate class of children are indeed painful.

William Hartell Bayliss, agent of James Loxdale, Esq., says:

"The men will send a boy where they do not go themselves, and some have their limbs broken, and others lose their lives. Some parishes will not let the butties have their pauper children as apprentices." (App. Pt. I., p. 65.)

John Greaves, a collier, states:

"The boys are not used so bad as they were; it is the butties' apprentices who are worst used. These lads are made to go where other men will not let their own children go. If they will not do it, they take them to the magistrates, who commit them to prison. Mr. ——— caused his apprentices to go where another person would not go. I have seen him take up his foot and kick them, to make them go." (Ibid., p. 67.)

Thomas Moorhouse, collier-boy at Halifax, says:

"I don't know how old I am. Father is dead. I am a chance child. Mother is dead also; I don't know how long she has been dead; 'tis better na three years. I began to hurry when I was nine years old for William Greenwood. I was apprenticed to him till I should be twenty-one; my mother apprenticed me. I lived with Greenwood; I don't know how long it was, but it was a goodish while. He was bound to find me in victuals and drink and clothes; I never had enough. He gave me some old clothes to wear, which he bought at the rag-shop. The overseers gave him a sovereign to buy clothes with, but he never laid it out. The overseers bound me out, with mother's consent, from the township of Southwram. I ran away from him because he lost my indentures, for he served me very bad; he stuck a pick into me twice in my bottom. [Here I made the boy strip, and found a large cicatrix, likely to have been occasioned by such an instrument, which must have passed through the glutei muscles, and have stopped only short of the hip-joint. There were twenty other wounds, occasioned by hurrying in low workings, upon and around the spinous processes of the vertebrae, from the sacrum upwards.] He used to hit me with the

belt, and mawl or sledge, and fling coals at me. He served me so bad that I left him, and went about to see if I could get a job. I used to sleep in the cabins upon the pit's bank, and in the old pits that had done working. I laid upon the shale all night. I used to get what I could to eat; I eat for a long time the candles that I found in the pits that the colliers left over night; I had nothing else to eat. The rest of the hurriers did not know where I was. When I got out in the morning, I looked about for work, and begged of the people a bit. I got to Bradford after a while, and had a job there for a month, while a collier's lad was poorly." (App. Pt. II., p. 118. See also Witnesses, Nos. 64 and 65.)

Mr. John Halliwell, the overseer of Oldham, gives the following evidence :

"Is it customary to bind the pauper children apprentices to colliers in this neighbourhood? Yes, we have bound more parish children apprentices to colliers latterly than to any other trade.—Are cases of cruelty to parish apprentices in coal mines common? Yes, we have had a good many cases lately; I was obliged to summon three cases within the last week, where boys had been unmercifully used; two of them were parish children, and one was the child of a widow who was a pauper; they were all bad cases, but one of them had nearly proved fatal.—Can you recollect the particulars of this case? These boys [for they were all supposed to have committed the same offence] had not brought dinners of their own down the pits, and, being hungry, it was supposed they had stolen other boys' dinners which were missing. For this they were punished in the following manner: One of the biggest of the boys, or a young man, got the boy's head between his legs, and each boy in the pit—and there were eighteen to twenty of them—inflicted twelve strokes on the boy's rump and loins with a 'cut.' I never saw such a sight in my life; the flesh of the rump and loins was beaten to a jelly in the worst case. The doctor said the boy could not survive; however, he did, and is, now in a fair way.—Do the boys ever refuse to beat the offender? It came out in the course of the inquiry, that it was a rule that any boy who refused to give his strokes is to be served the same way himself.—Do you think these were extraordinary cases? No, I believe it is a general punishment for this offence; for the old men who came forward to give evidence all stated that it had been the custom ever since they could recollect, and seemed to think it was perfectly right and justifiable.—What ages were these boys? The boy who was so very ill used was just ten, and the others would be twelve or thirteen.—Have you reason to believe that these boys were not properly supplied with food by their masters? Yes, there can be no doubt that they had been neglected.—Is it usual for the magistrates to cancel the indentures of colliers' apprentices? The magistrates have never broken the indentures excepting in one case, and then the boy's master was not to blame. His wife was a drunken woman, and she let the boy go without food, and he certainly was in a very bad state." (App., Pt. II., p. 233.)

We must give one more case. It occurred in February last, at Rochdale, and was related to the sub-commissioner, Mr Kennedy.

A case, which occurred during the month of February last, was related by Mr. Milner, of the firm of Lamb and Milner, surgeons, at Rochdale, who were called upon to visit the case. It appeared that the boy Edmund Kershaw had been apprenticed by the overseers of Castleton to a collier of the name of Robert Brierly, residing at Balsgate, who worked in a pit in the neighbourhood of Rooley Moor. Mr. Milner examined this boy, and found on his body from twenty-four to twenty-six wounds. His posteriors and loins were beaten to a jelly; his head, which was almost cleared of hair on the scalp, had the marks of many old wounds upon it which had healed up; one of the bones in one arm was broken below the elbow, and, from the appearances, seemed to have been so for some time. The boy, on being brought before the magistrates, was unable either to sit or stand, and was placed on the floor of the office, laid on his side on a small cradle bed.

It appeared from the evidence that the boy's arm had been broken by a blow with an iron rail, and the fracture had never been set, and that he had been kept at work for several weeks with his arm in the condition above described. It further appeared in evidence, and was admitted by Brierly, that he had been in the habit of beating the boy with a flat piece of wood, in which a nail was driven and projected about half an inch. The blows

had been inflicted with such violence that they had penetrated the skin, and caused the wounds described by Mr. Milner. The boy had been starved for want of food, and his body presented all the marks of emaciation. This brutal master had kept him at work as a wagoner until he was no longer of any use, and then sent him home in a cart to his mother, who was a poor widow, residing in Church-lane, Rochdale. (App., Pt. II., pp. 182, 183.)

GENERAL CONDITION OF THE CHILDREN.

After what has been said as to the ages at which children are put to work in the mines—as to the state and formation of the places in which they work—as to the nature of their occupations—as to the hours during which they work—and as to the treatment they receive, it is hardly to be credited that there are persons who profess themselves to be kindly disposed towards the poorer classes, and to be animated by a generous sympathy on their behalf, who are to be found expressing it as their opinion, that the mining population are engaged in a species of labour that is favourable to health, and to their general physical condition, and that they stand, in these respects, in a very favourable position, compared with even the agricultural classes! But it is even so.

Amongst these generous and charitably disposed persons, we feel bound to point out, particularly, Dr. Mitchell, one of the sub-commissioners, whose reports are throughout larded by such bits of sentiment as this:

“The Staffordshire coal-mines, to persons who have been accustomed to them, are very comfortable.”

“The pits (iron-stone) are usually of the temperature of a fine summer's day, or, as one of the witnesses expressed, ‘It is warm—beautifully warm.’ However unpleasant the coal-pits may be to persons who for the first time go down to see them, to those who are used to them they are *exceedingly agreeable*.”

“The mine, with all its disadvantages, is *not a disagreeable place*.”

It is to be observed, that he thus speaks of places which he elsewhere thus describes.

“The first step from the skip went above the ankle in water and wet coal-dust, and the second step was like the first. It was of no use, then, to be on ceremony, and we advanced forward. The water in one place was nearly knee-deep, and through this part we went on a carriage with a skip drawn by a horse. The water everywhere fell from the roof in great drops like the shower of a thunder-storm out of the roof of the gateways. The horses had wax-cloths spread over them to protect them a little from the rain. The water sometimes fell in spouts.”

But the doctor cites the testimony of one of the work-people, in order to justify his own opinion of the comfort of a coal-pit. He says—

“When it was observed to the men at work in the furthest part of the Hill's-lane pit, that it would make an excellent gaol, as the prisoners could not by any means make their escape, one of the miners said, that he would greatly prefer dwelling there day and night, than going into Shrewsbury gaol; for by being in the mine he should have his liberty.”

Surely no one can doubt that these places are very Elysiums, seeing that a man would prefer having his liberty in one of them to being laid in fetters in Shrewsbury gaol!

Dr. Mitchell is in positive raptures on the fine physical condition of the mining population. He says—

“Whoever has seen the boys, young persons, and the miners working in the mines naked from the waist upwards, or has seen them in the same state assembled at dinner, can never after doubt of their fine physical condition. If the boys and young persons were in bad physical condition, it would be impossible that the men could enjoy good health, or be strong and vigorous. Of the state of health of the miners, all the witnesses have been unanimous in describing it as most excellent, and better than that of other men.” (App. I., p. 21.)

"The physical condition of the boys is so satisfactory," &c. (*Ibid.*, p. 28.)

"That the miners, men and boys, are healthy, all the medical men assert." (*Ibid.*, p. 39.)

"The appearance of the children and men bespeaks their good physical condition." (*Ibid.*, p. 100.)

But we can be surprised at nothing coming from a man who has spoken in the following terms of the treatment of the children in the mines, after what we have shewn to be done with them:—

"That the *treatment* and *care* taken of the boys are good, their cheerful, happy appearance is evidence which no man who has seen them can in the least doubt. Independent of the good feeling which actuates proprietors and their agents not to allow oppression, the boys and young persons have the best of all securities for good treatment in the interest of proprietors and all persons under them. Their work is often of a kind which could not be so conveniently done by full-grown men, yet is altogether indispensable; and the boys and lads, if ill-used in one pit, could easily find shelter in another." (*Ibid.*, p. 100.)

There is a similar disposition to look at things on the favourable side for the proprietors and masters of the children, evinced by most of the other sub-commissioners, although they do not generally "go the whole hog," like Dr. Mitchell. Mr. Franks (East of Scotland), Mr. Symons (West Riding of Yorkshire), Mr. Kennedy (Lancashire and Cheshire), and Mr. Austin (North Lancashire), alone seem disposed to look at this branch of the subject with an impartial eye. It is true, that we have, in many parts of the evidence, the testimony of medical men to the same effect as the testimony of Dr. Mitchell. Several of these gentlemen draw a very favourable comparison between the physical condition of the colliers and that of others of the labouring classes; but, in most cases, their evidence is of a negative description; they are seldom called in to attend them; which is by no means proof of their general health; seeing, as we have seen, in what a frightful state of body many of this unhappy class are obliged to labour down in their subterranean workshops.

Many of the witnesses state that the children, at least, in a large number of cases, have seldom or never food enough; and it is hardly likely that badly-fed children can sustain such an amount of such a description of labour, as that incident to employment in a coal mine, and preserve a good state of health.

Joseph Haigh, underground steward, Tinsley Park collieries:

"Thinks the work itself would not hurt them, if they all lived regularly. Many have not proper meals at home. A boy that works ought to have meals every day alike, and regularly, like a horse; but they are often pinched at the end of the week." (*App. I.*, p. 228.)

Mr. William Higgett, steward to the Tinsley Park pits:

"Their meals are insufficient with some of them, owing to their belonging to very poor families." (*Ibid.*, p. 229.)

Matthew Lindley, collier:

"They have a little milk or a little coffee and a bit of bread in the morning before they go to the pit, and they will take nothing with them but a little bread, and perhaps a little tea, but oftener dry bread than anything else. Their parents cannot often get them more. They do not have meat. The parents do not get wages enough to provide meat for the children. When they come out of the pit at night, they may have a little meat or milk porridge, but a bit of dry bread and a sup of milk is the usual supper. The boys do look healthy, it is true, but it is because they are young. The work they get to do is not hard, as far as trapping is concerned, but hurrying is very slavish work, and I have known boys go to work all the twelve hours without more than a bit of dry bread to eat." (*Ibid.*, p. 250.)

The following is an extreme case, perhaps, "but it is only too correct an outline," says the sub-commissioner (Mr. E. Waring), "which might be filled up with still darker colours in portraying the unhappy class to which Harvey belongs:

John Harvey, thirteen years of age, a carter in Crown Pit (Mr. Waters's):

"Gets potatoes and butter, or potatoes fried with bacon, when he goes home from the pit; gets whatever he can catch; is always very hungry after work; seldom has as much as he could eat. Does not go to Sunday-school, because he has no clothes besides what he works in. Cannot read. Never had a pair of shoes or stockings in his life."

Sub-Commissioner:

"This boy has evidently been stunted in his growth; I should say more from want of sufficient food than any other cause. He states that he has rarely as much as he wants, and subsequently acknowledged that he had sometimes gone without food for two or three days! He is straight, and not badly proportioned, but has altogether a melancholy and starveling appearance. Mr. Waters confirmed this boy's statement, on my naming his assertion of having gone without food for two or three days, saying that he learnt the fact too late to obviate such sad privation. It was named to him immediately afterwards, and he knows this poor little fellow did actually work in the pit for three days without food, for sheer poverty, which should not have happened had he known in time that the boy was so badly off. He has a drunken father, and an improvident mother." (App., Pt. II., p. 40.)

"This lad," says the sub-commissioner, "is a pitiable specimen of a much-enduring class of colliery boys, whose subsistence depends on their own exertions, often prematurely stimulated, either from being deprived of their fathers by death, or labouring under the curse of drunken, dissolute, and unfeeling parents, who would apathetically see their children enslave themselves, rather than contribute to their comfort by a single act of self-denial. These neglected beings turn out in the morning, taking with them a scanty bag of provisions, to be eaten in the bowels of the earth, where they toil out their daily dole of eight or ten hours; then return to a comfortless home, taking their chance of a good meal, a bad one, or none at all. For a bed they are content with an old coal-sack laid upon straw, or occupy whatever portion they can secure of a family bed, which must suffice for three or four other inmates. Grovelling in their habits, depressed in spirit, and without any stimulus to improvement, these poor boys passively take such work and wages as they can most readily obtain, and, if they can satisfy the cravings of hunger, seem to abandon all expectation of anything further, beyond the most sordid covering for their nakedness, and a place of shelter and repose. Some of them will eagerly ask permission to work by night occasionally, as well as by day, for the sake of a small addition to their weekly pittance. To these victims of ignorance and poverty the Sabbath is a day of wearisome vacuity, or reckless play. An act of worship is nearly as strange to them as to a Hottentot, unenlightened by Christianity. Instruction they have no idea of, and, if they had, the want of decent clothing would keep them from mingling with their better provided yoke-fellows at the Sunday-school. It will be seen by the evidence, that this half-fed and half-clothed lad—stunted in growth, so that his companion in carting, though two years younger than himself, is a full head taller—assists in drawing 2 cwt. of coal a distance of 160 yards in a tub without wheels. I did not ascertain how many tubs are carted by these two boys, one pulling and the other pushing behind, during their day's work; but, judging from the general practice, I should say from fifty to sixty. Even supposing them to be fewer, this is surely hard labour for the poor returns of 5s. 6d. weekly; that is, 3s. to Harvey, and 2s. 6d. to his helper." (Ibid., p. 32.)

Supposing the little labourers to be better fed, however, is it credible that the nature of the work to which young children are put in a coal mine is favourable to bodily health? The sub-commissioners produce the negative testimony of professional men in favour of the healthful condition

of the mining children; we find the positive evidence of some of these gentlemen which goes the other way.

Dr. Favell, M.D., of Sheffield:

"Is of opinion that where children (especially female children) are harnessed to corves, and where the seam is so low that they are forced to go on their hands and feet, and where the ventilation is also not good, the occupation must necessarily be prejudicial to their health." (App., Pt. I., p. 235.)

Henry Hemingway, Esq., surgeon, Dewsbury:

"I have examined the children working in a thin and in a thicker bed of coal, and found projection of the sternum; and sinking in of the spinal column is common in the thin bed, and only in a few instances in the thicker bed of coal." (Ibid., p. 232.)

Of the physical condition of the collier population in the Lancashire and Cheshire district, the sub-commissioner reports as follows:—

"As far as I had the opportunity of judging, it appeared to me that the proportion of still-born infants was rather large, and certainly the care bestowed on the children and the state of their dwellings could not be considered favourable to their healthy growth. The adults are thin and gaunt. One or two colliers, somewhat corpulent, were pointed out to me as remarkable for being corpulent. They have a stooping, shambling gait when walking, no doubt acquired from their occupations in the low galleries of the mines. Their complexion, when washed, is pallid, approaching to a dirty yellow; the eye is languid, and, sometimes inflamed, and the expression of the countenance is listless." (J. L. Kennedy, Esq., App., Pt. II., p. 188.)

The sub-commissioner reports very unfavourably of the health and strength of the collier population of the East of Scotland, and assigns the following reasons for their bad physical condition:—

"1st. Because the food taken is too poor in quality, and insufficient in quantity to sustain such severe labour, consisting for the most part of oaten cake, oaten bread, or porridge; no butchers' meat; even the hewers do not enjoy the luxury of common table beer, and the children invariably drink the water in the pit. 2nd. Because the food, bad in quality and scanty in quantity as it is, is always taken most irregularly, there being no fixed time set apart for meals. 3rd. Because the air of the mines in which the work is carried on, and which the workpeople respire, as well as the air of the houses in which they are crowded, instead of being pure, which is indispensable to convert aliment into nutriment, is loaded with noxious matters. 4th. Because the hours of work are much too long for children of eight years old and under. 5th. Because the medical evidence shews that this labour is injurious to the bodily frame. There exists a general want of cleanliness in the habits of the colliers, with exceptions, of course; though I believe it is usual for them to wash their faces once in the day after labour, and sometimes the children follow the same example; but the younger children, not at work in the pits, present a miserable appearance. The ragged and dirty clothing of the whole family, the flesh of the children, which seems perfectly innocent of water, and blackened by the general employment, added to the squalid aspect and unwholesome stench of the place, bespeak at one glance a population neglected and abandoned to a course of life which has blunted the commonest perceptions of human comfort. As might be expected, these hovels are infested with vermin, as are the persons of the children." (R. H. Franks, Esq., App., Pt. I., p. 306.)

The statements in proof of these several positions so abound in every page of the evidence collected, that we deem it useless to refer to particular instances.

Elsewhere, Mr. Franks says—

"From a careful examination of the collected evidence, and from attentive inquiry into the several subjects distinguished in this Report, I submit to you the following points, as the result of my investigations:—

"That labour in the collieries of the counties of Glamorgan, and Pembroke, in South Wales, and of Monmouth, in England, is unwholesome, and productive of diseases which have a tendency to shorten life or reduce the number of years of useful labour in the mechanic.

"That the physical health of children and young persons are deteriorated by their employment at the early ages, and in the works before enumerated." (p. 491.)

We have deemed it right to dwell, at some length, upon this part of our

subject, in consequence of the disposition which, as we have said, seems to be evinced by some of the sub-commissioners to gloss it over in a favourable manner. We would not have it understood, however, that our object is to induce a belief that the colliery population is in general a sickly race of people. It is not so. But neither would we have it be believed that their labour can be favourable to health. The following are the impressions left upon our minds after having carefully gone through the evidence:—

1. The little that is known of the actual health of the colliery workers induces the too favourable inference, that they are generally robust and healthy.
2. The young children have such a trying ordeal to pass through, that, on the Spartan principle, they must either sink under it, or become tolerably hardy and enduring.

And these impressions seem to be justified by the following extracts from the evidence:—

Mr. Leifchild says—

“Some of the physical effects of pit work are of tardy growth and manifestation; hence they must be looked for and estimated in some of the old collieries, where the labour has been the uninterrupted occupation of generations. Conclusions deduced, for example, from the appearance of the work people in the newer collieries of the South of Durham would be partially fallacious. In scrutinizing the boys, the corporeal characteristics of the adults may be frequently noticed in incipient development in the adolescents, or hereditarily transmitted to the children. Small bulk of body, paleness and angularity of visage, and their general appearance, which is very far from robust, would lead to the conviction that they are a somewhat deriorated race.

“The average of such measurements (the details of which would be superfluous), as their perpetual mobility admitted of my noting, together with my inspection of more than a thousand of these boys, evinced that, as a class (with many individual exceptions), their stature must be considered as diminished. In collieries located in the vicinity of a nautical population, the variation in stature between pit boys and the neighbouring youths was not so apparent as in pits surrounded by a large proportion of agricultural labourers.

“Some effects of employment in coal mines that might have been assumed from *a priori* conclusions were not found to be established by actual experience. Of this nature is the natural supposition that the exclusion from sun-light during so large a portion of the day (and in the case of the boys in winter, it almost amounts to an exclusion from the entire daylight) would be actively injurious to the eyesight. But this is not found to be the case in the young; and in the old an occasional tendency to regard objects, especially books, with a peculiar oblique look, is all that I could discover. The most remarkable effect of the exclusion in the mines is the paleness of countenance so generally observable, and so strikingly contrasted with the ruddy visages of those employed at bank.

“There can be but little doubt, however, that their occupations and presence in the pits are physically injurious to the boys. Notice may be taken of their complaints of want of appetite, of ‘bad air,’ of nausea and vomiting, of illness, of boils and sickness, of working in wet places.

“Additional enumeration and references are unnecessary; for the evidence abounds with instances of the pernicious effects of pit work. It would seem scarcely possible that even a zealous partisan could peruse many pages of the evidence, and retain his opinion that the labour of the boys is ‘healthy.’” (App., Pt. I., p. 525.)

Even Dr. Mitchell, who, as we have seen, is on all occasions so anxious to set forth the healthy and robust condition of the colliery labourers, juvenile and adult, gives the following, in the evidence of a surgeon in Shropshire:

“The children are frequently diseased, chiefly of chest affections—that is, of the heart and lungs. Scarcely one in ten escapes. They work beyond their strength. He has almost always cases under his care of vomiting of blood, frequently brought on whilst actually employed at their work. This he thinks arises from exertion beyond their strength, and takes place in children between eight and thirteen. The children are not fit for such work until thirteen, or at most, only some few who are exceptions. Down in the pits the children draw the carriages, when the beds are so low that asses cannot be employed. They

are geared like beasts of draught. In after-life they suffer from the same diseases, as the suffering at their early age lays the foundation of diseases of the heart and lungs. Most colliers at the age of thirty become asthmatic. There are few attain that age without having the respiratory apparatus disordered. They are subject to hypertrophy of the heart at that age, no doubt laying the foundation of such disease at the early age of from eight to thirteen years. Few colliers attain the fifty-first year. This may be said in every respect the same with persons of all description. The children being injured in early life continue to suffer all their lives after. Many die young from consumption, and suffer all their lives from diseases of the lungs. There is very little difference between the coal-mines and the iron-mines."

He also gives the evidence of George Marcy, clerk to the Wellington Union, in the county of Salop, who says—

"Many applications are made from miners for relief on account of sickness, and chiefly from asthmatic complaints, when arrived at an advanced age. At forty, perhaps, the generality suffer much from asthma. Those who have applied have been first to the medical officer, who has confirmed what they said. About forty, the greater part of the colliers may be considered as disabled and regular old men, as much as some are at eighty."

And of George Potts, clerk to the Madeley Union, which comprises the parishes of Barrow, Benthall, Broseley, Buildwas, Dawley, Linley, Little Wenlock, Madeley, Much Wenlock, Posenhall, Stirchely, and Willey, being twelve, who says—

"The colliers often apply for relief on account of accidents in the mines, and from sickness. They begin to apply on account of permanent debility at about from forty-five to fifty, and after that time it is considered that a man is unfit for his work as a collier, but can still work on the bank, or attend to an engine, or other less laborious work than going into the pits." (Ibid., p. 81.)

Mr. Pearson, surgeon to the dispensary at Wigan, says—

"I cannot speak to the comparative mortality among the children of colliers as compared with other mechanics; but my impression is that it is much greater than in the agricultural districts, and especially at the early periods of infancy.

"Have you remarked anything peculiar in the external appearance of the young persons in the collieries, or that any deviation is observable in the ordinary functions of the system, which you think can be attributed to employment?—Yes, particularly amongst females, in whom I have frequently noticed that the secretive functions of the uterus are obstructed; in some the secretion never develops itself. Those who are so affected become bloated and masculine. I should attribute this to the laborious nature of the employment in which they are engaged, and to their frequently being obliged to work in wet places. Women have frequently told me that they have to work almost constantly up to their knees in water.

"Have you ever noticed particularly the diseases of colliers?—They are very subject to rheumatism and disease of the heart; they are subject to erysipelas, and ulcers on the legs. This may be attributed partly to the nature of their employment, partly to their being exposed suddenly to cold when ascending from the mine in a state of perspiration, and partly to their exceedingly irregular habits. The continual irritation of the coal upon the skin, which they scarcely ever wash, with the exception of the face and arms, may have a tendency to produce certain diseases and boils; and they are also subject to ophthalmia. This may be attributed to the sudden transition from dark to light, and *vide versâ*; and the coal-dust is also very irritating to the nervous membrane of the lid. Colliers are often ruptured, and they often come to me for advice. As to clothing, the colliers, and especially the children, are very ill-clothed; they are filthy, and cleanliness is rarely attended to; and I have never seen any difference in their clothing in summer and winter."—(App., Pt. II., p. 189.)

Mr. Symons, who considers the colliers, generally, to be a hardy race of men, says—

"The effect on health produced by carbonic acid gas is very great. It appears to prevent the decarbonization of the blood, and to return it deficiently purified to the heart; hence complaints of the heart and lungs. (See the Evidence of Mr. Hemmingway, p. 221.)

"I believe that the strength and robustness of the children is owing, first, to their ample and nourishing food; secondly, to their work, hurrying in the pits being a healthful gymnastic exercise, where not carried to great excess. I believe their somewhat stunted growth to be owing chiefly to their deprivation of daylight, and also to overworking, where it occurs.

"The deterioration is far more visible in the adult. This I attribute to the fact that though the health is not immediately injured, that nevertheless the extremely early age at

which children are entombed in mines, and deprived of light, and subjected to subterranean effluvia, must lay the seeds of subsequent decay. Add to this, that the intensity of the work increases greatly as soon as the youth begins to earn more as a getter than as a hurrier. 'If,' said Robert Cutts, (No. 17,) a collier at Intake, near Wandsworth, 'If any are hurt, it's when they are from fifteen to twenty. Hard work begins at fifteen.'

"The collier of fifty is usually an aged man; or, if not aged-looking, he looks overstrained and stiffened by labour." (App., Pt. I., p. 193.)

Mr. Fellows thus speaks upon the subject:—

"In concluding this part of my Report, (on Derbyshire,) I am sorry to say the evidence I obtained from the medical men in various places I visited is so very contradictory, even if attending adjoining coal-fields, that I am obliged in many respects to report from what I saw myself and could obtain from the colliers themselves.

"I met with very few colliers above forty years of age, who, if they had not a confirmed asthma, were not suffering from difficult breathing.

"Rheumatism is also very general. (See Eastwood, No. 84; Shipley, No. 40.) I believe you will scarcely meet a collier, and ask him what he thinks of the weather, but he will in reply say, 'Why my back or shoulders have or have not pained him so much as usual.'"

Dr. Mitchell, as well as some others of the sub-commissioners, furnishes evidence of the large numbers of children in the colliery population who died at a very early age. After marshalling the proofs of the healthy condition of the colliers, he says—

"All this is favourable; but on referring to the registration of deaths, we find that in the mining districts of Staffordshire and Shropshire there is a larger proportion of deaths of children under three years of age than in any other district in England, Manchester and Salford only excepted, being, in 10,000 deaths of males of all ages, not less than 4671 under three; and of 10,000 deaths of females of all ages not less than 4572 under three.

"We are compelled to infer that the country, or the manner of treating the children, is decidedly unfavourable to infant life. The children of strong constitution only survive, and hence the same appearance as is observed by voyagers who visit savage tribes—they seem strong and of vigorous constitution. It is so; for the feeble died in infancy." (Ibid., p. 22.)

In his report on the Shropshire district, the passage just quoted being from his report on the Staffordshire district, the Doctor repeats the same thing, and adds,—

"On inquiring of the medical men the cause of such mortality, not one of them seemed to be aware of it, and the reason assigned for not knowing it was, that medical men are very seldom called in to children of that age. The lady of a surgeon at Wellington attributed much of the sickness and mortality to want of cleanliness, and also to the children being frequently left by the mother in charge of a young girl, who perhaps had several to take care of, and consequently they were sometimes neglected. But there is another cause which probably operates more efficiently still, and that is, the administering of quack anodyne medicines.

"Mr. Cooper, a surgeon, of Bilston, stated, in his evidence respecting the children—'The chief evil which they have to endure is, that when very young their mothers injure them by quackery, and give opiates, such as Godfrey's Cordial, which is a mixture of treacle and opium. Many deaths are caused by quack medicines. Medical men seldom see the children until they are benumbed and stupefied with opiates.'

"Mr. Matthew Webb, a surgeon, resident at Bankhouse, in the parish of Wellington, in Shropshire, says:—'Much injury is done to very young children, by giving them spirits in their food, and anodyne quack medicines—Godfrey's Cordial, also Daib's Carminative, which consists of magnesia, tincture of asafetida, penny-royal water, and opium, and various other medicines into which opium enters. The children are frequently injured by not obtaining a supply of milk, which is scarce in the district in winter, and by being fed with scalded bread, coarse brown sugar, and gin. The extreme sweetness injures the stomach, and takes away appetite. Sometimes the girls left in charge of children give them gin to keep them from crying.'

"When the young children pass through such an ordeal as this, of opium and gin, it is

no wonder that so many of them should die. The children who have good natural constitutions, and little sickness or pain, will not cry much, and will seldom have these popular medicines administered to them, and will of course pass unimpaired.

"A few days after, I spent an evening with some scientific gentlemen, at the house of Mr. John Gray, at Dudley, and conversed on this subject. They told me that it was usual amongst the working people for nurses to give a teaspoonful of gin to a new-born child. To children a little older, gin is often administered 'to break the wind off the stomach.' Godfrey's Cordial is known by the name of 'comfort,' and is an article in constant demand. A little girl will come to the chemist's, and ask for a dose of it to give to the baby next day, telling him that her mother is going out to wash. A respectable chemist of the town joined the party. He stated that he made twenty gallons of 'comfort' in the year, and that there were chemists who lived nearer the market-place, and more in the way of the country people, who made a great deal more."

This is one of the many evil consequences of forcing mothers away from their homes, to undergo the labours appropriate only to the other sex. If young children must be left at home without their natural "comfort," those who should supply that will necessarily attempt to make up for the lack of it, by such deleterious and destructive compounds as "Godfrey's Cordial. "After such a thorough drafting off by the use of gin and opium," says Dr. Mitchell, "it is no wonder that the survivors should be a very healthy race, until they have arrived at that period of life when the constitution yields to the effects of severe labour, and the air of the mines."

We close this part of our subject with the following inferences, deduced from the evidence, by the chief commissioners themselves:—

"That the employment in these mines commonly produces in the first instance an extraordinary degree of muscular development, accompanied by a corresponding degree of muscular strength; this preternatural development and strength being acquired at the expense of the other organs, as is shewn by the general stunted growth of the body.

"That partly by the severity of the labour and the long hours of work, and partly through the unhealthy state of the place of work, this employment, as at present carried on in all the districts, deteriorates the physical constitution; in the thin-seam mines, more especially, the limbs become crippled, and the body distorted; and in general the muscular powers give way, and the workpeople are incapable of following their occupation, at an earlier period of life than is common in other branches of industry.

"That by the same causes the seeds of painful and mortal diseases are very often sown in childhood and youth; these, slowly but steadily developing themselves, assume a formidable character between the ages of thirty and forty; and each generation of this class of the population is commonly extinct soon after fifty." (Report, p. 258.)

ACCIDENTS.

Every person employed in a coal-mine is from minute to minute exposed to so many sources of danger, that "in spite of skill and unremitting attention, the risk is constant and imminent." "It is a life," says one of the witnesses, himself a collier, "of great danger both for man and child; a collier is never safe after he is swung off to be let down the pit."

In the year 1835, a select committee of the House of Commons was appointed to inquire into accidents in mines, and from their Report it appears that there has been a notable increase in the number of fatal accidents since the introduction of an instrument which was intended and which is unquestionably calculated to lessen them—i. e., Sir Humphrey Davy's lamp. In the eighteen years previous to the introduction of the lamp, 447 persons lost their lives in the counties of Durham and Northumberland, whilst in the latter term of eighteen years the fatal accidents amounted to 538. To account for this increase, it may be sufficient to observe, that the quantity of coal raised in the said counties has greatly increased; seams of coal, so fiery as to have lain unwrought, have been approached and worked by the

aid of the safety lamp. Many dangerous mines were successfully carried on, though in a most inflammable state, and without injury to the general health of the people employed in them. Add to this the idea entertained, that on the introduction of that lamp the necessity for former precautions and vigilance in great measure ceased.

The chief accidents to which persons employed in coal mines are exposed are:—1. Falling down the shaft, whether of a pit in work, or of one now abandoned. 2. The falling of something on the head while descending or ascending the shaft. 3. The breaking of the rope or chain. 4. The falling of something from the roof of the mine. 5. The being drawn over the pulley and dashed to the ground or precipitated down the shaft from the neglect of the engine-man. 6. Being crushed by a mass of coal unexpectedly falling while the hewers are “undergoing.” 7. Suffocation by carbonic acid gas. 8. Suffocation or burning, or both, from the explosion of carburetted hydrogen gas. 9. Drowning from the sudden breaking in of water from old workings. 10. Minor accidents from falls in the mine, and injuries from the horses and carriages.

Of the evidence collected relative to the frequency and the causes of these accidents, in the several coal-fields of the United Kingdom, it would be impossible, within reasonable limits, to give an account; all that can be attempted here, is to direct attention to some of the statements that occur in the evidence and in the Reports of the sub-commissioners.

In North Staffordshire, Mr. Scriven (App., Part II., p. 127,) states, accidents from the explosion of carburetted hydrogen gas to be very common. Describing his visit to one of the pits, he says—

“I was informed by the buttie that wild-fire, as they call it, was not uncommon here, and I too soon heard of a melancholy proof of it, an explosion having occurred only a few days after my visit, by which three men were severely burnt, and four others killed. There appeared to me to be a great want of precaution in the use of lights, and by their frequent application to crevices in the strata of coal, in order to ascertain whether sulphur was really present, as would be indicated by the burning of the jets that issued from them.”

In Derbyshire, Yorkshire, South Durham, and South Gloucestershire, the accidents from the same cause are very numerous.

In Cumberland, numerous and appalling accidents are recorded to have taken place, in consequence of the reckless manner in which mines have been continued to be worked under the sea, after evidences of peril had been discovered.

“The accident which occurred in Mr. Curwen’s pits near Workington, about two years ago, from an irruption of the sea, was foretold by many. It appears that the seam of coal rose under the sea, so that in working it every step brought the colliers nearer to the water. The salt water is said to have oozed through, and some of the men had heard, or said they heard, the sound of the sea above them. So great was the apprehension, that some of the colliers left their work, and others were only induced to stay by a higher amount of wages. At length the water rushed suddenly in, and though some who were near enough to the entrance escaped, about forty fell victims, and remain to this hour in the pit. The sea, of course, rapidly filled it, and a black gurgling whirlpool for some time marked the aperture and the entrance of the waters at a considerable distance from the shore. The rush of air expelled by the water was so violent that it blew the hats off of those who stood near.” (J. C. Symons, Esq., Report: App., Pt. I., p. 300.)

“Mr. Alvan Penrice, colliery-agent for Henry Curwen, Esq., states: “The sea broke into three of Mr. Curwen’s pits, which were under the sea, on the 28th of July, 1837, three years before I had the management; Ralph Coxtton was the manager. They were working the pit out to sea and towards the rise. They were nearly two miles under the sea from the shaft. They were continually getting nearer to the water as the workings were getting further to the rise. It was a report among the men that there was some danger prior to the accident. There is no doubt that the pit was making salt water long before. Had I had the management of the colliery I should certainly not have worked the colliery

to anything like the same extent. Some got out. It happened in the night. None were left to tell how it happened, because where it broke in none escaped. The whole of the water had to pass through two drifts about six feet square. The bodies were never recovered. The funeral service was read over the pit-top. The place where the water broke in was discernible in the sea by the blackness of the place. It appeared that the hole was about eighty yards by thirty. The colliery had been worked for fifty years, and there must have been a large space excavated; and it was all filled with water in two hours and a half." (Ibid., p. 307.)

From the evidence of the Rev. Henry Curwen, son of the proprietor of the Workington Colliery, it appears that higher wages were given to the men to induce them to incur the hazard of working in pits where danger was apprehended. He says—

"There was a report some time before the accident, that a sand-feed was apprehended, but I am satisfied that no warning reached Mr. Curwen as to the liability of an irruption of the sea. After the accident had occurred, but not till then, I heard that men had been paid higher wages for working in the pit. The report I heard was, that the pit would be lost if we continued working it for three weeks, owing to a sand-feed; and I spoke to my mother as to whether my brother should be informed of it; but it was a mere rumour." (Ibid., p. 310.)

From the evidence of Mr. William Thornton, under-ground steward at the William Pit, it appears that Coxton, the steward, had been distinctly warned of the danger, but instead of listening to the warning, he discharged the overman who gave him the caution.

"My uncle, William Thornton, was an overman at the Workington Colliery, and he warned Coxton, the steward, of the probability of the sea breaking in, and was discharged in consequence. I heard before myself that there was danger. We keep seventy fathoms above us, nearly all of sandstone; sixty fathoms would be safe, but it would of course depend on the nature of the soil." (Ibid., p. 310.)

Another very fatal accident occurred at the John Pit, Harrington, belonging to Mr. Curwen, of which the following is the account given by Thomas Martin, Esq., sub-commissioner:—

"It was in this pit that the calamity of 1838 occurred. On that melancholy event the foreman went down first, but thirty-eight of those whose lives were lost had gone down, and were waiting together till his examination should be announced, when the explosion of fire-damp from his light drove them in an instant into corners of the space about them, jamming them into each other in a mass—instantaneous death. Two men and a boy were at the time in the act of descending, near the pit's mouth; all were driven up into the air, but the boy and one of the men, falling outside, escaped; the other fell into the pit, making with the foreman the forty who perished. Since that memorable day, the foreman and deputy go down by themselves and examine before the workmen come: and 'not so much as a bone,' said Clayburn, 'has been broken since.'" (App., Pt. I., p. 879.)

In the year 1839, a similar catastrophe occurred in the William Pit, belonging to Lord Lonsdale, as had occurred in the preceding year in the John Pit, belonging to Mr. Curwen. Of the accident in the William Pit the following account is given by the sub-commissioner:—

"On the 18th of February, 1839, nine men and twelve boys, who were at work in different parts of the pit, were suffocated (not burnt) by means of an explosion of fire-damp. On the Saturday before, there was no appearance of damp; and the 'waster,' as the person is called whose business it was to examine, had on the Monday morning found all places safe till he came to the last, by which time the people had gone to their work; but going into the last with a boy, who, besides his safety-lamp, had an open candle in his hand, the damp, which had been accumulating since the Saturday, exploded at once. These two were much scorched, but escaped with their lives. The others that were in the pit perished, with the exception of one man, who was recovered. Since last January one man has been killed in this pit, and two or three are not unfrequently killed in it in the course of a year; 'but sometimes we are without losing one.' The more usual cause is the falling of a stone from the roof. Great caution had been observed before, and every possible care appears to be taken now." (Ibid., p. 876, l. 27.)

In this case, not only was the same absurdity repeated of letting the men down into the pit before the "waster" had completed his survey, as produced the catastrophe of the John Pit—the lesson afforded by the latter being wholly disregarded—but there was the further absurdity of the boy carrying a Davy-lamp in the one hand for the sake of safety, and a naked lighted candle in the other, as if for the sake of danger. Beyond this there can be no conceivable thoughtlessness and folly; and when such management is allowed in the mines of two of the most opulent coal-proprietors in the kingdom, we cease to wonder at anything that may take place in mines worked by men equally without capital and science.

In some of these places there is no record kept of the fatal accidents that occur, although there is reason to believe that they frequently take place.

Mr. Leifchild, in reporting upon the North Durham and Northumberland districts, says—

"The only public notices of the northern colliery accidents in existence are, I believe, contained in a local tract entitled, 'Syke's Local Records,' and in the contemporaneous public newspapers. Both these sources have been carefully waded through, with the kind assistance of James Mather, Esq., of South Shields, from which, and from my personal inquiries of the viewers of the various pits, I am enabled to present, certainly, the completest list of lives lost, during the period in question, that has ever yet appeared in print." (App., Pt. I., p. 547.)

Then follows a list extending from the year 1799 to 1840 inclusive, comprehending an enumeration of explosions, inundations, suffocation by choke-damp, after-damp, breaking of chains, bursting of boilers, falls, falling of earth, falling of stone from the roof, unhooking of corves, timber falling down the shaft, drowning from old workings, falling down the shaft, and breaking of shaft ropes. From this account it appears that, in the year 1838, the deaths by these various casualties were thirteen in number, being two by the fall of stone in Stewart Pit, and eleven by explosion in Wall's End Pit. Such is the statement made as to the deaths by accident in this district during the year in question, after the most careful search for information in the "local records, and in the contemporaneous public newspapers, together with personal inquiries on the spot of the viewers of the various pits." Now the return from the Registrar-General, already quoted, has shewn that the deaths which certainly took place about the coal-pits in this district, in the year 1838, were seventy-three in number; thus, according to the information to be obtained from the local press, aided by the statements of the coal-viewers of the different pits, who can hardly be supposed to be really ignorant of the facts, the total number of persons killed is only thirteen. By an authentic record, it is proved to be at least seventy-three; and it is quite possible that many more are really due to this list, but the entries of which, by the local registrars, are not sufficiently explicit to enable us to ascertain them with absolute certainty.

Mr. Franks makes a similar complaint touching the East of Scotland, and Mr. Jones, of the West of Scotland. The former says—

"In the absence of all satisfactory returns on this head we have the authority of a medical gentleman well acquainted with the colliery districts, that a week seldom passes without some serious accident occurring in one or more of the collieries, and several persons are killed, or die in consequence of accidents, every year. These accidents arise from the falling in of the roof, the sudden and unexpected fall of coal before the collier has time to draw back, the rending of ropes, &c.; and this is fearfully confirmed by the witnesses whose evidence I have collected, and who bear testimony to a vast number of individual cases of this sort, but which, of course, are not sufficient to enable us to form any general estimate on the subject. In Scotland there are no coroners to inquire into sudden and violent deaths; and serious accidents of an appalling nature frequently occur, and no notice whatever appears to be taken of them." (App., Pt. I., p. 893.)

Of the neighbourhood of Halifax it is stated that "the accidents and personal injuries to which they (the workpeople) are subject are consequent upon explosions, falls in coming up and going down the shafts, falling roofs and walls, and from the speed and weight of loaded corves, which, if they happen to be in the way, run over them." After giving the parti-

culars of the deaths from accidents and explosions obtained from the coroner for a period of three years, the sub-commissioner observes—“Here are fifty deaths, and of this number thirty-four have occurred to children and young persons under sixteen years of age.” On the perusal of the verdicts it will be seen that in a large proportion of these cases the fatal results might have been obviated by precaution and care on the part of the proprietors and of the colliers themselves; nor has this neglect subjected the parties guilty of it in any case to that reprehension and punishment which it appears to me might be employed with effect in diminishing their frequency. (S. S. Scriven, Esq., App., Pt. II., pp. 71, 72.)

But we must not enlarge upon this topic. It must suffice to say, that some idea may be formed of the prodigious number of fatal accidents constantly occurring in the pits, by the fact that, in the Wear and Tyne district of Northumberland, perhaps the safest and best managed in the kingdom, during the last forty years, 1500 lives have been lost by fatal accidents alone. Of these, 262 have occurred in the last six years out of 14,790 persons employed under ground, as nearly as can be calculated, in the Wear and Tyne district, giving an average, there, of one fatal accident in every 340 persons yearly! Mr. Buddle is of opinion, that fewer lives are lost, on the whole, by explosion, than by other casualties; and it seems to be placed beyond all doubt, that however many of these accidents may be attributed to the negligence or recklessness of the workpeople themselves, a still greater number is attributable to the avarice or negligence of the proprietors of the mines. We have, in a preceding page, mentioned the culpable practice of employing little boys as engineers. The carelessness of these poor children, if we must so call it, often occasions fractured limbs, injuries for life, and even death itself.

John Jackson, overlooker, Morley Park, says—

“Nine weeks ago two men and two boys were descending, when, through the engine-boy being absent, the engine reversed and drew them over the pulley; one boy about thirteen years of age was killed; another about eighteen was so much hurt that he lost his arm, and is never likely to get well again; another broke his leg; the engine-boy is dismissed.” (App., Pt. II., p. 325.)

Mr. John Stafford, agent of the Morley Park Coal Mines, says—

“All the shafts are worked by chains and no rope; no accident, excepting Alfred Butler, who was killed 12th February, by he and three others being drawn over the pulley-wheel; he was aged thirteen. Francis Walker was also much hurt; has lost his arm. Abraham Stone had his leg broken; the other escaped unhurt. It was owing to the neglect of the engine-boy, who took his trial at the assizes, but was liberated on consideration of his having been six weeks imprisoned.” (Ibid., p. 324.)

James Warrener, a miner, 69 years of age, examined at Oldham, by Mr. Fletcher, says—

“The worst thing that has ever been brought about against the colliers, is in the masters employing little bits of lads as engineers. The best thing you can do is to look after these engineers, to see that they have men of age and reason to know the value of a man's life. Let any one look and see a child left in care of a man's life, and more the pity. The man who left you just now is a worthy man, but he is overlooker in a colliery, and dare not mention this subject to you. Do you not think that a bad lad, who thought he could thereby play him a day, would not let a misfortune come?—Really believes it; and therefore, until a man has come to maturity of age, and to know the price of a man's life, he is not to be trusted with the management of an engine. The most encroachment that ever came on collier men in his time has been for children to manage engines. Is one of the oldest colliers in Oldham, has children and grandchildren in the pit, and would like to know them in safety. And if this can be put a stop to, may the Lord send it! Anything (of a boy) that they could teach, and get for the least wages, they would employ, without valuing men's lives. If any man of wisdom and knowledge will go to the pits around, and see the children in charge of the engine, let him see if they are fit to have the care of men's lives. And the children who are taken into the pits are taken at an age

when they can know nothing of the danger they go into; and if anything is to be stopped this ought to be. Is positive that ignorant and bad lads have in this district produced many misfortunes. The steward dare not speak the truth, but himself is not muzzled. The engineers sometimes got killed themselves from being too little. It is a general complaint among the working colliers that children so young are employed as engineers. They grumble both going in and coming out; but if the men complained they would be turned out of employment, and might work no more. Was once let down himself by a lad whom he had beaten the night before for his carelessness; and he let the tub in which he was go down at such a rate that the wheels were broken, and he saved himself only by running up as much of the loose rope with his hands as he could. No youth ought to have such a charge until he were twenty or twenty-one. But if the masters can get such a duty discharged by a boy to whom they give 5s. or 7s. a week, it is so much gained to them upon the wages of a man, whom they ought to employ. There are children as engineers who are not thirteen." (App., Pt. II., p. 847.)

We close this part of our subject with a few extracts, which will shew the peril to which the children employed in the pits are commonly exposed :

Robert Robinson, 14 years old—

"My two sisters were sair horrible crushed by stones falling from the roof; their bowels were forced out, and legs broken." (App., Pt. I., p. 463.)

Andrew Gray, 11 years old—

"Been laid aside, with crushes from stone falling from room, more than a month." (Ibid.)

Andrew Gray, aged 57—

"My wife wrought below till within last eight years, when she got crushed by a stone, and not been able to work since." (Ibid.)

George Hogg, aged 32—

"My wife did work below till she met with a serious accident last year. The cage which brings the coals up the shaft suddenly descended, and crushed her almost to death. She was then four months gone in the family-way; is now quite disabled from work, and no hopes given of her ever being able to return." (Ibid., p. 464.)

Mary Sneddon, aged 15—

"I have only wrought at Bo'ness Pit three months. Should not have ganged but brother Robert was killed on the 21st January last. A piece of the roof fell upon his head, and he died instantly; he was brought home, coffined, and buried in Bo'ness kirkyard. No one came to inquire about how he was killed; they never do in this place." (Ibid., p. 476.)

Thomas Walker, aged 13 :—"There are many accidents here; my father has just had his collar-bone broken; and the son of William Guy, who was killed nine months gone, got his leg broken by roof falling." (Ibid., p. 478.)

Helen Reid, sixteen years old :—"Two years since the pit closed upon thirteen of us, and we were two days without food or light; nearly one day we were up to our chins in water. At last we got to an old shaft, to which we picked our way, and were heard by people watching above. Two months ago I was filling the tubs at the pit bottom, when the gig clicked too early, and the hook caught me by my pit-clothes—the people did not hear my shrieks—my hand had fast grappled the chain, and the great height of the shaft caused me to lose my courage, and I swooned. The banksman could scarcely remove my hand—the deadly grasp saved my life." (Ibid., p. 441.)

Janet Duncan, seventeen years old :—"The carts I push contain three cwt. of coal, being a load and a half; it is very severe work, especially when we have to stay before the tubs on the braes, to prevent them coming down too fast; they frequently run too quick, and knock us down; when they run over-fast, we fly off the roads and let them go, or we should be crushed. Mary Peacock was severely crushed a fortnight since; is gradually recovering." (Ibid., p. 460.)

Margaret Harper, thirteen years old :—"We hurry the carts on the railroads by pushing behind; I frequently draw with ropes and chains as the horses do; it is dirty, slavish work, and the water quite covers our ancles. I knock my head against the roofs, as they are not so high as I am, and they cause me to stoop, which makes my back ache." (Ibid., p. 471.)

Mr. Marshall, oversman to the Hirse, or Netherwood Colliery :—"Six weeks back a boy (Robert Russell), thirteen years of age, met his death by a hutchie passing over his body and crushing him; he never spoke after: and another (William Blair), twelve years of age, was crushed to death by a falling stone from the roof. Two men were killed

within the last two years by the roofs falling. It is not the custom to notice those accidents; we neither give notice, nor do the friends of the parties. The practice is to bury them a day or two after their decease."

Robert Jameson, oversman to the Stronne Colliery:—"We have much fire in the pit at times. Two men were killed (Stirling and King) a short time since by explosion; Stirling had a Davy in his pocket, but descended with his oil lamp lighted, when explosion momentarily took place. A short time since four men were drowned by accidentally pricking into an old working. No notice of accidental deaths. They (the deceased) are sent home to their friends, and afterwards buried." (Ibid., p. 393.)

Henrietta Frankland, eleven years old, drammer:—"When well I draw the drams (carts), which contain four to five cwt. of coal, from the heads to the main roads; I make forty-eight to fifty journeys; sister, who is two years older, works also at drammaing; the work is very hard, and the long hours before the pay-day fatigue us much. The mine is wet where we work, as the water passes through the roof, and the workings are only thirty to thirty-three inches high. I have been laid idle two months, as a horse fell upon me and the cart passed over me and crushed my inside; no ribs were broken, but the pain was very great, and continues still."

We might multiply such cases to an indefinite extent, but what we have given are sufficient for our purpose. To shew how little is thought of even fatal accidents, we may state that

Dr. Alison remarks, in reference to the East of Scotland district—"I am pretty sure about fifty people under my care and connected with collieries have lost their lives in consequence of accidents occurring in the works around Tranent, and I do not remember of an investigation having been made by the sheriff in more than one instance." (Ibid., p. 394.)

Dr. Mitchell, who presumes that even the discomforts and horrors of a coal mine may, after a time, become "*agreeable*," and even "*delightful*," seems to be operated upon by a similar feeling in reference to such accidents as we have described. He says—"Altogether, the narratives of calamities in the mines are most appalling, *until a person has become accustomed to hear them.*"

CHAPTER V.

OF THE INTELLECTUAL AND MORAL CONDITION OF THE PERSONS EMPLOYED IN MINES.

OF the effects of the employment of children and females in the collieries and mines of the United Kingdom, the commissioners say nothing in the present report. They propose to treat of that in their next report, in connexion with the intellectual, moral, and religious state of the whole of the working population. In the meantime, we are not without the means of forming some judgment upon the subject, from the materials comprised in the evidence appended to the first report.

That the intellectual condition of the colliery and mining population is generally very low, many proofs have been incidentally furnished in the preceding pages.

The very nature of the employment in which they are engaged must exercise a most unfavourable influence on the mind. There is a dull monotony and absence of device in colliery labour, furnishing no stimulus to the uneducated mind, whilst the employment in most other branches of industry is calculated to excite an inquiring spirit, to exercise the observant

faculties, sharpen the wits, and enlarge the comprehension. We may judge of the mental condition of the children employed in mines, from the circumstance of Mr. Waring (App., Part II., p. 35) drawing a comparison between the smartness and intelligence of these and of the manufacturing boys, greatly to the advantage of the latter. And all that we find in the reports and evidence leads to the same conclusion. Mr. Holroyde, a surgeon, of Halifax, who seems to be familiar with the condition of the various classes of persons engaged in mines and manufactures, says—"Want of proper intercourse with society (caused by their employment being underground) produces often a state of imbecility, which in some cases that have come under my observation had approached almost to idiotism." (Ibid., p. 97.)

Mr. Franks, speaking of the colliers in South Wales, says—

"Education is a subject to which the working people seem to attach little value. Ignorant themselves, and never having suffered severe distress, they note no distinction in the wages of the boy or the man who can read or write and those who do not; and they cannot appreciate the value of that education of which they themselves never knew the want. The consequence is, that the children, if they go to Sunday-school, are sent rather as a mark of respect to those who recommend education, than from any esteem for the benefits to be derived from instruction. Parents are careless of the attendance of their children at school; and it has been observed to me that in a free-school opened for the instruction of the children of working people, copy-books, &c., were expected to be found for the children, and because they were not found, the children were withdrawn from school. It is difficult to get children to attend the Sunday-schools for the same cause—the carelessness of parents; and it is to be lamented that numerous as are the chapels of many denominations of Christians, and large as are the congregations which at the appointed hours of public worship, through these chapels, both in the week and on the Sunday, the spiritual education of the young seems to be grossly neglected.

"It is much to be lamented that few or no efforts are made to facilitate a change in the habits of the manufacturing and mining population of South Wales. A little time and thought given to the welfare of the people, would not only tend to wean them from the gross habits in which they indulge, but would produce an abundance of kindly feeling between the employer and the employed. It has been suggested that the establishment in mining or manufacturing districts of reading-rooms for the better sort, of decently-conducted coffee-rooms, with books, periodicals, &c., for the working man, together with familiar lectures on matters connected with the labour of each district, and this not conducted with too strict a hand, or under the imposing titles of Athenæum, Mechanic's Institute, or Temperance Hall, but rather in an inviting and conciliatory spirit than in the exclusive tone which too often mars the effect of such well-intended attempts, and in the villages a little more of wholesome incitement to excellence in the distribution of small prizes for the best cottage, the best garden, &c., would be productive of immense good; nor can these things be done with half the efficacy by others as by those who are resident amongst the people themselves. A personal interest in the people, and the distribution of but a small fund in each district to the humble purposes alluded to, would invite the labourer from the vulgar line he now treads in. As matters stand at this moment, in the largest manufacturing town (Merthyr Tydvil), the working man after labour has no resort but the beer-shop; his boy accompanies him, his daughter often passes the evening there. It is unnecessary to pursue this further. It is not intended to be inferred that the collier, or mining, or manufacturing population is to be changed by one sudden movement; but it is surely a source of deep regret that a small portion of the enormous wealth of the land, and some of the influence of large proprietors, should not be applied to the improvement of the moral and educational condition of its inhabitants—the productive sources of that wealth." (App., Pt. II., p. 471.)

But it is in their moral condition that these people suffer most. We have already seen that in the districts in which females are taken down into the coal mines, both sexes are employed together in precisely the same kind of labour, and work for the same number of hours; that the girls and boys, and the young men and young women, and even married women, and women with child, commonly work almost naked, and the men, in many mines,

quite naked; and that all classes of witnesses bear testimony to the demoralizing influence of the employment of females underground.

Before looking more particularly at the proofs of this, as it is to be found scattered throughout the evidence, let us attend to what one of the sub-commissioners says of the indirect proofs which the habits of the colliery population furnish of the low state of their moral feelings.

Mr. Kennedy has the following judicious remarks in his report upon the Lancashire district :

“ The comparison of the amusements of different classes will afford one means of deciding upon their relative moral and social condition. Now we must observe that the colliers work shorter hours, have more leisure and higher wages, than most other classes of operatives. When we regard their amusements we find that their passive relaxations are distinguished by abject indolence, amidst filth, gross sensuality, and drunkenness; and that their active amusements, as far as they can obtain them, are of that brutal kind which have always characterized the most barbarous periods of history, or the customs of people universally regarded as savages.

“ If we approach an agricultural village we find the cottages distinguished by the external neatness of the garden, and by comparative cleanliness in the interior. Even the working people themselves remark that the colliers' residences may be known by the accumulations of filth and excrement at their doors, and by a savage bull-dog in the house.

“ The houses of colliers which I have visited were, for the most part, filthy dens, furnished with a few rude stools and dirty beds, and occupied, in the absence of the parent, by dirty, neglected, and half-clothed children. Amongst the most deplorably poor of the hand-loom weavers we find amusements even of a literary character.

“ I was informed that there were a few very rare instances of the colliers about Oldham having paid attention to gardening, but I neither met with nor could hear of any instances of colliers who had given their attention to literary or scientific amusements. Having no education and no aptitude for less coarse and more innocent pleasures, this class of labourers seize with avidity, and indulge to excess, in sensual pleasures, which are gross, expensive, and mischievous.

“ Some writers have given exalted and romantic accounts of wild and barbarous classes, and have held up savages to admiration as ‘ children of nature.’ Those persons, however, who have carefully and dispassionately examined their condition, invariably conclude that the course of happiness and real improvement is to be found in a constant departure from that state, rather than a return to it.

“ The ignorance of the colliers may be lauded as ‘ primitive simplicity,’ and their occasional unrestrained good humour, carelessness, and coarse indulgence as ‘ unsophisticated happiness;’ but, after all, their condition must be regarded as a savage one, beset with all the evils of the savage state, fraught with much danger to the civilized community around them, and also with such perils and mischiefs to the State as are exemplified by the ‘ children of nature,’ comprising the population of Merthyr Tydvil, Newport, St. Giles, the liberties of Dublin, or of the Faubourg St. Antoine of Paris.

“ The dangers attendant on the condition of the collier population are exemplified in the evidence of the police officers, and are so certain, that the police have only to know that colliers are unchained from their ordinary work, either by strikes or other causes, to be prepared for extraordinary outrages on persons or property. In their condition, even the fanaticism to which such ignorance naturally runs, must be hailed as a great step in moral improvement. These evils can only be eradicated for the future by the education of the juvenile population, and, as I have already stated, it appears to me that the interference of the legislature is imperatively required.” (App., Pt. II., pp. 187, 188.)

Mr. Franks speaks in a similar manner of the colliery mining population of South Wales :—

“ I am led to believe that their children, in infancy, are the objects of tender maternal solicitude; and if the Welsh mother knew the dangers which awaited the physical constitution of her child by its exposure to the foul air of the colliery at the immature age of five years, no legislative enactment would be required to limit the age at which the boy should commence work. At five years of age, however, arises the call for labour; to add an extra half-crown per week to the wages of the father, the child is sent into the mine. From this period the mother seems to consider herself relieved from the responsibility of the treatment and care of her child; that child follows a new teacher, a new instructor.

The father or the employer becomes the object of his imitation; he drinks, smokes and swears—the child follows his example, and children of seven years of age, and even less, will be found to enter in their expenses at the shop their supply of tobacco: and the evidence will shew that swearing, drinking, and obscene language, are vices too frequent amongst the young." (Appendix, Pt. II., p. 481.)

The direct evidence of the tainted character and depraved habits of the colliery workers, especially of the female portion of them, is, unhappily, of the most overwhelming kind.

How is it possible that female children should be inured to such habits as are spoken of in the following extracts, and not have every particle of modesty and decency destroyed?

Mr. Symons, reporting upon the Yorkshire Coal Field, says—

"It is my duty to direct your attention to the deplorable outrage of introducing females into collieries, which prevails at Silkstone and Flockton. One of the most disgusting sights I have ever seen was that of young females, dressed like boys in trousers, crawling on all fours, with belts round their waists, and chains passing between their legs, at day pits. When I arrived at the board, or workings of the pit, I found, at one of the side boards, down a narrow passage, a girl of fourteen years of age, in boys' clothes, picking down the coal with the regular pick used by the men. She was half sitting, half lying at her work, and said she found it tire her very much, and 'of course, she didn't like it.' In two other pits in the Huddersfield Union, I have seen the same sight. In one, near New Mills, the chain, passing high up between the legs of two of these girls, had worn large holes in their trousers; and any sight more disgustingly indecent or revolting can scarcely be imagined than these girls at work. No brothel can beat it. I took their evidence afterwards, when they were sent to me washed and dressed, and one of them, at least, was evidently crammed with her evidence."

These girls were, at the time spoken of, aged fourteen and a half, and thirteen, respectively; they had been at work in the pit eight years, and the flippant manner in which the younger of the two gave her evidence, shews what effect her employment and associations have had upon her moral feelings. She said—

"There are other girls that hurry in the same way, with belt and chain. Our breeches are often torn between the legs with the chain. The other girls' breeches are torn as often as ours; they are torn many a time, and when they are going along we can see them all between the legs, naked. I have often; and that girl, Mary Holmes, was so to-day; she denies it; but it's true, for all that."

Another part of Mr. Symons' Report, from which the following is an extract, says:—

"The practice of employing females in coal-pits is flagrantly disgraceful to a Christian, as well as to a civilized country. On descending Messrs. Hopwood's pit at Barnsley, I found assembled round the fire a group of men, boys, and girls, some of whom were of the age of puberty, the girls, as well as the boys, stark naked down to their waists; their hair bound up with a tight cap, and trousers supported by their hips. Their sex was recognisable only by their breasts, and some little difficulty occasionally arose in pointing out to me which were girls and which were boys, and which caused a good deal of laughing and joking. Five of these girls came well-dressed in the evening to be examined. * * * In the Flockton and Thornhill pits the system is even more indecent; for though the girls are clothed, at least three-fourths of the men for whom they hurry, work *stark naked*, or with a flannel waistcoat only, and in this state they assist one another to fill the corves eighteen or twenty times a-day. I have seen this done myself, not once or twice, but frequently. Neither do the girls or the men attempt to gainsay the fact. * * * When it is remembered that these girls hurry chiefly for men who are *not* their parents, that they go from fifteen to twenty times a day into a dark chamber, which is often fifty yards apart from any one, to a man working naked, or next to naked, it is not to be supposed but that where opportunity thus prevails sexual vices are of common occurrence."

The evidence given by several of the witnesses fully bears out Mr. Symons' opinion of the frightfully immoral tendencies of this disgusting practice.

John Thornley, Esq., one of her Majesty's Justices of the Peace for the county of York, who states that he has had forty years' experience in the management of collieries, says:

"The system of having females to work in coal-pits prevails generally in this neighbourhood. I consider it to be a most awfully demoralizing practice. The youths of both sexes work often in a half-naked state, and the passions are excited before they arrive at puberty. Sexual intercourse decidedly frequently occurs in consequence. Cases of bastardy frequently occur also; and I am decidedly of opinion that women brought up in this way lay aside all modesty, and scarcely know what it is but by name."

Matthew Lindley, a Yorkshire collier, fifty-two years of age, says:

"I wish that the government would expel all girls and females from mines. I can give proof that they are very immoral, and I am certain that the girls are worse than the men in point of morals, and use far more indecent language. It unbecomes them in every way. * * * I have known myself of a case where a married man and a girl who hurried for him had sexual intercourse often in the bank where he worked."

And another collier, named John Simpkin, aged forty, says:

"I have worked a good deal where girls were employed in the pits. I have had children by them myself; I have frequently had connexion with them in the pits. I am sure that this is the case, especially in the pits about Lancashire."

Mr. John Clarkson Sutcliffe, general agent for the Gauber Colliery:

"The morals of the girls do suffer from it, from being together along with the lads. They all meet together at the Bull-stake, and it is the same as a rendezvous. The boys and girls meeting together harden and encourage one another in acts of wickedness, more so than if they were only boys." (App., Pt. I., p. 253.)

Matthew Fountain, under-ground steward at Darton Colliery, belonging to Thomas Wilson, Esq.:

"My opinion decidedly is, that women and girls ought not to be admitted into pits, though they work as well as the boys. In my belief, sexual intercourse does take place, owing to the opportunities, and owing to lads and girls working together, and owing to some of the men working in banks apart, and having girls coming to them to fill the corves, and being alone together. The girls hurry for other men than their relations, and generally prefer it. Altogether it is a very demoralizing practice having girls in pits. It is not proper for females at all." (Ibid., p. 254.)

Joseph Ellison, Birkinshaw, near Birstall:

"I know a case of a girl being employed as a hurrier, having been attempted to be ravished frequently by her father-in-law, till at length she could not be got down into the pit. Where girls are employed, the immoralities practised are scandalous." (Ibid., p. 288.)

A respectable inhabitant of Silkstone, a female:

"I consider it a scandal for girls to work in the pits. I am credibly informed that in some pits scenes pass which are as bad as any house of ill-fame; this I have heard from young men who work in the pit." (Ibid., p. 248.)

At a meeting of above 350 working colliers from the surrounding district, held in the Court-house, Barnsley, before the Sub-Commissioner, among others the following resolution was passed:—"That the employment of girls in pits is highly injurious to their morals, that it is not proper work for females, and that it is a scandalous practice." (Carried with five dissentients only.) (Ibid., p. 262.)

These extracts are chiefly made from Mr. Symons' Report; but other of the assistant-commissioners report similarly. Mr. Scriven in his report from the West Riding, says:

"Girls, from five to eighteen, perform all the work of boys. There is no distinction whatever in their coming up the shafts or going down—in the mode of hurrying or thrusting—in the weights of corves, or in the distances they are hurried—in wages or dress. * * * They are to be found alike vulgar in manner and obscene in language; but who can feel surprise at their debased condition, when they are known to be constantly associated, and associated only, with men and boys, living and labouring in a state of disgusting nakedness and brutality, while they have themselves no other garment than a ragged shift, or, in the absence of that, a pair of broken trousers, to cover their persons.

"I have often been shocked in contemplating the hideous, and anything but human, appearance of these men, who are generally found in a state of bestial nakedness, lying their whole length along the uneven floor, and supporting their heads upon a board or short crutch, or sitting upon one heel, balancing their persons by extending the other. Black and filthy as they are in their low, dark, heated, and dismal chambers, they look like a race fallen from the common stock."

Amongst the witnesses who gave their evidence before this gentleman were several of these wretched children. Their condition may be judged of by an extract or two:—

Patience Hershaw says—

“I wear a belt and chain at the workings to get the corves out. The getters are naked, except their caps; they pull off all their clothes. I see them at work when I go up. The boys take liberties with me sometimes; they pull me about. I am the only girl in the pit. There are 20 boys and 15 men. All the men are naked. I would rather work in the mill than in the coal pit.”

Ruth Barnett says—

“I come down into pits in linings of old trousers, which I take off. I wear an old waistcoat and shift. I do not like working in pit; I would not do it if I could help it.”

Mary Barnett says—

“I do not like working in pit, but I am obliged to get a living. I work without stockings, or shoes, or trousers; I wear nothing but my shift.”

We might multiply evidences of the frightfully demoralizing effects of this disgusting practice; but it is unnecessary—we have given enough.

Mr. Franks, in his report of the condition of the children employed in the mines in Lothian and River Forth districts of Scotland, states that the employment of females in this description of labour there, is generally considered to be so degrading, that “other classes of operatives refuse inter-marriage with the daughters of colliers who are wrought in the pits.”

Great praise is due to the Methodists and to the Independents, and to other religious sects, for the exertions they have made in some of the mining districts, to bring the children under the influence of moral and religious instruction—in some districts with great success. But it will be readily believed, after what has been said as to the severe and protracted labour of the children generally, that the objects of these benevolent persons in very many cases prove abortive. The proofs of the utter ignorance of many of the children of the lowest description of religious truths, which occur in the Reports, are really astounding. We give a sample or two:—

Morgan Lewis, nine years old, puller up:

“I have never been at any day-school; am sent to Mr. Jones’s Sunday-school to learn the Welsh letters; can’t say I know them yet. I do not know what you mean by catechism or religion; never was told about God. The sky is up above, and no one ever told me about Jesus Christ; cannot say what he is.”

Sophia Lewis, twelve years old, labourer in the iron yard:

“We have never been to any day-school; sister and I go to the Welsh Sunday-school, to learn the letters, (can scarcely tell one letter from the other in the Welsh primer.) Mr. Jones tells us that Jesus is our Lord, but does not know what he means by our Lord, nor who is God. There may be Commandments, but I never heard of any.”

Edward Davis, about ten years old, hooker-on:

“Have not much time after work, as always wash. Never spoke any English; father and mother speak Welsh, and so does Mr. Jones, the preacher, whose Sunday-school I go to. I can say the Welsh letters, for I have been two years at school. (Not able to manage the letters—said D was G, and C the latter A.) I do not know anything about God.”

Richard Williams, aged nine years and three-quarters, air-boy:

“I come at six in the morning, and leave at six or seven in the evening. I have never been to day-school; I attend the Independent Sunday-school. Never heard of Jesus Christ. I don’t know the Lord’s Prayer.”

Evan John, aged thirteen years and a half, haulier:

“I have been at the work about four years. Was four years at day-school; it was a Welsh school. God was the first man; knows nothing of the Commandments.”

John George, aged fifteen, behinder:

“I have been for eight or nine years at work as plate opener. I was for twelve months at a Welsh school; Jesus Christ made me; thinks Jesus Christ made God.”

Mary Paine, age 17, unloader:

“They never have told me anything of Jesus Christ, nor do I know who he is.”

Henrietta Frankland, aged 11, drawer:

“Sister Maria, (thirteen years old, as well as myself, have not been to school since at

work ; I do not know whether God made me, nor anything about Jesus ; there are no Commandments."

David Thomas, aged 15, in-filler :

" Was at day-school, and learned the spelling ; there are Ten Commandments : one, say you must not steal, and the Christ is God. Thinks Jesus Christ was born in Wales, and went to England : now goes to the Sunday-school of the Independents."

These cases are all taken from the evidence collected by Mr. Franks ; but this ignorance is not confined to Wales. It seems to exist everywhere, more or less. The following is from Mr. Scriven's Report on the Collieries of Halifax :—

Thomas Mitchell, aged 13 :

" I never heard of Jesus Christ ; I don't know what you mean by God ; I never heard of Adam, or know what you mean by Scriptures ; I have heard of a Bible, but don't know what 'tis all about ; I do not know what would become of me hereafter if I am wicked, I have never been told ; if I tell a falsehood or lie, I tell a lie ; it may be good or bad, but I don't know the difference."

Anna Hoile, aged 12 :

" I never went to day-school, but I began for the first time to go Sunday-school yesterday ; I cannot read ; I have heard of God, and of Jesus Christ, but I can't tell who that was ; if I died a good girl I should go to heaven—if I were bad, I should have to be burned in brimstone and fire ; they told me that at school yesterday, I did not know it before ; father nor mother never reads to me at home ; they never go to church or chapel ; I never went before."

Henry Jowett, aged 11 :

" I never went to day-school long, but I went a little while before I came to pit, and then I did not want to stop at school, but I wanted to come to pit ; I go to Sunday-school ; they teach me a, b, ab ; I do not know who God is—Jesus Christ is heaven ; if I die a bad boy I do not know what will become of me ; I have heard of the Devil—they used to tell me of him at the every-day school ; father does not go to church or chapel on Sundays ; he does nought but stop at home ; I go to chapel now a Sundays, 'tis not so long sin' I began a going."

Mr. James Wilcox, a proprietor of mines, states :—

" You have expressed some surprise at Thomas Mitchell not having heard of God. I judge (he continues) that there are very few colliers hereabout that have. There is a Sunday-school in the village, at which some of them go, but it does not advance them in learning much ; it keeps them from idleness on the Sunday, and doing mischief from beating the fields, and destroying hedges, but very few colliers care much about it."

Such is the amount of Christian knowledge possessed by a large portion of the juvenile labouring population, in a country in which the most touching appeals are daily made to the religious public, to induce them to furnish the means of sending out missionaries to Christianize foreign lands ! Is there not a passage of Scripture which says, " He that provideth not for his own house, hath denied the faith, and is worse than an infidel" ? It would be well for some of our religious folks to bear this text in mind.

CHAPTER VI.

OF THE HIRING, AND THE WAGES PAID TO PERSONS EMPLOYED IN MINES.

I. OF HIRING.

THE mode of hiring the persons employed in coal mines, varies in different districts. Sometimes the proprietors enter into a contract with certain persons, variously designated as *butties* or *charter-masters*, who engage

to get the coal and bring it to the foot of the shaft at a certain rate ; and these contractors hire all the persons required to work the pits. Sometimes the proprietor himself engages, all the work people, and sets persons over them to see that they perform their duty ; but in other cases the proprietor contracts with the chief workmen, who hire every one who is employed in getting the coal and bringing it to the foot of the shaft.

In Staffordshire, Shropshire, Warwickshire, and Derbyshire, the first of these systems is in universal use, the contractors or butties engaging to do all the work of the mine as far as is necessary to bring the coal to the foot of the shaft ; but the proprietor erects the steam-engine, pays the engine-man and the people who raise the coals on the bank, and finds what is termed "the drawing power."

In the West of Scotland, Yorkshire, Lancashire, Cheshire, and some other places, the system of hiring is widely different. The hewers or getters generally undertake to deliver the coals at the foot of the shaft at a fixed rate, employing their own assistants to convey the coals from the workings to the shaft. It is in this occupation of conveying the coals from the workings to the shaft that by far the largest proportion of the whole body of children are employed, and consequently this system of working the coal mines renders these children entirely the servants of the colliers. The youngest children, however, those whose duty it is to attend to the air-doors, are commonly hired by the proprietors.

In the coal mines of the vast coal districts of Durham and Northumberland, all descriptions of work-people whatever, whether employed underground or on the bank, are in the service of the company or of the individual occupier of the coal mine, and are accordingly placed under the orders of officers of higher and lower degree, who direct their labour and keep them at their duty. The hiring of the hewers, putters, and generally of the drivers, is by the year. There is a bond signed by them specifying the conditions ; the substance being that they are to do the work of the pit, and be subject to certain forfeitures or penalties for their neglect of duty. The masters, on the other hand, are bound to pay a certain fixed price for the work performed ; and if the hewers are not employed at all, or are only partially employed, the masters are bound to advance them, at the end of every fortnight, a fixed sum for their maintenance.

II. OF WAGES.

In Staffordshire, the wages vary in different pits. The holers make some 3s., some 4s. a-day. A collier also has an allowance of coals for his family, and in some places a quart of beer, and in other places two quarts of beer a-day, but they complain much of its quality. Boys who drive the horses in the gins have 6d. a-day, and boys opening air-doors in the pits have 6d. or 8d. a-day. The wages of boys and young men who load the skips, at the ages from thirteen to fourteen, are about 12s. a-week ; up to ages from seventeen to eighteen, when the wages are about 14s. 6d. The wages of pitchers at the ages from eight to nine, are 5s. a-week, gradually rising to ages from fourteen to fifteen, when they are from 7s. 6d. to 8s. a-week. The wages of pushers at the ages of from nine to ten are from 4s. to 5s. a-week, gradually rising to ages from seventeen to eighteen, when the wages are about 15s. a-week. The wages of drivers of horses in the pits at the ages of from ten to eleven, are about 5s. a-week, gradually

rising to ages from seventeen to eighteen, when the wages are about 14s. a-week.

In Warwickshire and the Coalbrookdale districts, boys from six to seven may earn in the pits 6d. a-day. At nine they may earn 10d. to 1s., according to the work. About twelve a boy gets 1s. 6d. to 1s. 8d., and some as much as 2s. a-day. Wages generally in Shropshire are not as high as in Staffordshire, by a fifth or a sixth part.

In the Ashby-de-la-Zouch and Derbyshire districts, a very young child is paid 8d. a-day, and when the boy is able to walk with the horses, the wages rise to 1s. 5d. and 1s. 8d. About sixteen, the young man gets 2s. a-day, and gradually advances until he arrives at 3s.

In Yorkshire, a trapper earns generally 6d. a-day. The hurriers and others, in the thick-coal pits, at eleven years old, will earn about 5s. a-week, on the average, those of fourteen will earn 8s., and those of seventeen 12s. The wages of the men vary greatly with their industry and strength; for young able-bodied men the average will be perhaps 20s. a-week, but many make 25s. In the thin-coal pits wages will be from 10 to 20 per cent less.

In Lancashire and Cheshire, the best children will get from 3d. to 8d. per day; and the drawers' earnings will range from 4s. to 15s. a week, according to their age.

In Lancashire, the highest weekly wages of children under thirteen, returned by employers, is 11s.; the lowest, 1s. 6d.; and the average, 6s. 3d.; the highest weekly earnings of young persons from thirteen to eighteen, 18s. 6d.; the lowest, 3s.; and the average, 7s. to 10s.

The wages for both men and children in Cumberland are very good; they vary from 1s. to 2s. per day for the drivers and trailers, and from 18s. to 25s. per week for the adult colliers.

In South Durham, though the hewers be not employed at all, or only partially employed, the masters are bound to advance them at the end of every fortnight the sum of 30s. for their maintenance. This is in addition to a house and coals. But when the hewer comes into employment which yields more than 30s. in the fortnight, the surplus above 30s. is detained to pay off the sum advanced to him in slack time; which sum, therefore, is to be considered as simply a loan, and not a payment of money due. By this system the miner is always sure of the means of support, with 15s. a week; his house, and firing.

The putters are a highly paid class, many of the age of seventeen and eighteen get 40s. to 44s. in the eleven days of the fortnight, that is, if at that age they are sufficiently vigorous to urge forward a tram singly, and can do it as rapidly as a man in his full strength! If they be not so strong, the wages are less. When two are required to unite to urge forward the tram, the produce of the work is divided between them, either equally, or in a portion beforehand agreed upon.

In North Durham and Northumberland, the overmen earn from 25s. to 32s. per week, and the hewers about 3s. 9d. per day. The earnings of putters vary considerably; from 1s. 3d. to 2s. 6d. per day. The foals get 1s. 6d. per day, and the trappers 10d.

In the east of Scotland, hewers earn about 16s. a week; and putters about 5s. 10d., besides which they have an allowance of coal.

"In some cases, in the West of Scotland," says the sub-commissioner, "from the destitution to which the want of a regular relief for the poor,

subjects families, and particularly orphans, or children of widows in Scotland, a collier is enabled to obtain the services of a child by merely supplying him with food and clothing. The collier himself earns from 12s. to 24s. per week, and the female drawers from 3s. to 12s.

In Wales, the amount of wages in the collieries and mines is pretty much on a par; according to capability, boys receive from 2s. 6d. to 10s. a week, and are paid by weekly wages—all of which, or nearly all, the parents receive for food and clothing. (Report, § 33: App., Pt. II., p. 369.)

In the Forest of Dean, the average wages of the door boys, who are usually from eight to ten years of age, is 3s. per week. At "hodding" and "carting" the wages vary from 7s. to 18s. per week, according to the age and strength of the lads. The highest rate is rarely earned by lads under eighteen years of age. A stout boy will frequently earn from 12s. to 15s. per week. These rates of wages imply full work, or six days in the week, which the state of trade unfortunately will not always permit. (E. Waring, Esq., Report, §§ 26, 33, 34: App., Pt. II. p. 3.)

In South Gloucestershire, the sub-commissioner states the current wages of adult colliers to be from 18s. to 20s. per week, when in full work. Lads from fourteen to eighteen earn from 7s. to 12s.; and boys under thirteen, from 2s. to 6s. per week, according to their ages and capabilities. Many of the boys appear to be wretchedly paid for their labour, by the low remuneration of 3d. or 4d. a-day.

In North Somersetshire, it is noticed that the young people in the collieries are better paid than those in other occupations, "some of them getting 9s., some 12s., and others 13s. 8d. per week." But there are boys of ten and eleven, who are working for 5d. a-day.

III. THE TRUCK SYSTEM.

The wages of the labourers of all ages employed in collieries appear in most cases to be paid in the current coin of the realm, at fixed periods, weekly or fortnightly, though sometimes monthly, and occasionally at intervals of six weeks. But in some of the districts, usually the more remote and poor, payment in goods, more or less extensive, and more or less directly, is resorted to by many of the employers. This is especially the case in the West of Scotland.

"I have no hesitation in saying," states Mr. Tancred, "that the spirit of the Truck Act, and in some cases its very letter, is most grossly violated in numerous works, by which unfair and illegal profits are made from the hard-earned wages of the work-people." Pursuing the same subject into detail, he shews the relation between this system and the long intervals at which the wages are paid, and the laws for the arrestment of wages peculiar to Scotland. (App., Pt. I. pp. 337—344.)

Again, in the Wales district, it is stated by Mr. Franks, that

"In many parts of Glamorganshire, and Monmouthshire the wages of the working collier population are very rarely paid in money, but a shop in the neighbourhood, not professedly in the hands of the proprietors of the works, advances goods to the workmen employed in the mine, on account of the proprietors; the books of the shop and the books of the colliery are checked on the pay-day at the same office, and the balance, if any, is handed over to the men. It very often happens, however, that the men unfortunately have nothing to receive for months together. It is said by many that the necessaries of life are dearer in these shops by 25 per cent. than in others perhaps five miles off; but whether this is the case or not I cannot decide; but I am convinced that the system adopted has a very pernicious effect on the independent means of subsistence of the labouring population, since there rarely is any balance in the hands of the workmen to apply for the purposes of

education. By a reference to the evidence of John Evans, schoolmaster, (No. 270.) you will see the effect of this. The witness says, 'Nothing can exceed the mischief of the shops; men will go to the shop and get a pound of sugar, or what not, and take it to the public-house for drink. I frequently myself take goods from the colliers instead of money; the colliers have no money. I can't do anything else; I can't express myself sufficiently strongly on this subject. There is very seldom any balance for the working man to receive; they are screwed down to the lowest possible pitch.'" (App., Pt. II., pp. 482, 483.)

In Derbyshire, the evidence collected by Mr. Fellows affords one clear instance of the payment of children's wages in truck; the mother of two boys stating that—

"They are paid once a month, and is quite sure if she wanted any money between times, she could not have it otherwise than by a ticket for Horseley's Tommy-shop. Has never been obliged to sell her goods purchased there, but has bought of others; they sell bacon, cheese, potatoes, flour, bread, groceries, flannels, and worsted. Twice a year they are paid only once in six weeks; they then call it the Tommy Fair. Has known those who had money to go to Belper save 1s. out of 3s. by buying their goods there." (App., Pt. II. p. 342.)

Another witness in the same neighbourhood says—

"They take a ticket from the butties, who are always ready to give it, as they say they receive so much in the shilling for themselves." (Ibid., p. 341.)

Other forms of truck used by the butties in their payment of the labourers, and by the overlookers in the payment of the butties, are thus described by Mr. Fellows:—

"In most coal fields the butties are paid every other Saturday night; at others only once a month, and they are allowed to draw subsistence money weekly. On the butty receiving the money, he appoints the colliers and children to meet him, either at his own or some beer-shop he has an interest in, and generally keeps them waiting until he considers it has answered his purpose well enough, when the landlord produces the change and his bill. By this stratagem and system, the colliers and children are not only compelled to wait, but consider themselves lucky if they get home before midnight; being moreover driven to the necessity of making all their markets on a Sunday morning. At some fields the butties are only settled with once a month or six weeks, and no subsistence is allowed them, except from a Tommy-shop belonging to the overlooker of the works." (App., Pt. II. p. 255.)

In Ireland the truck system is in full operation. The sub-commissioner who visited the collieries in Kilkenny and Queen's County, after describing a class of contractors similar to the butties of Derbyshire, adds—

"The contractor generally keeps a shop for the sale of tobacco, bread, bacon, herrings, &c., from which his men obtain their supplies on credit till the settling day, when the amount of their bills is deducted from the wages coming to them, thus causing endless disputes, quarrels, and bickerings; many of the poor fellows told me they had seldom any money to take on the settling days. With the exception of those belonging to the Rushes Colliery Company, who discountenance the practice, nearly all the pits and shafts, of which there are an immense number, are let in this way; but very few of them, comparatively, are worked on the proprietor's own account. This very bad custom has prevailed so long that several of the proprietors and their agents told me they could not break through it, much as they condemned it as bad for all parties concerned, except the contractor, and that the only way effectually to do away with it would be by sinking new shafts and working them themselves, which some of them are about doing." (F. Roper, Esq., App., Pt. I., p. 873.)

CHAPTER VII.

CONCLUDING REMARKS.

WE have now completed the irksome, because extremely painful, task, of gathering from the evidence furnished by the numerous witnesses examined

under the commission, such a description of the employment, treatment, and condition of the children and females employed in the mines and collieries of the United Kingdom, as may be calculated to afford to those who read it some idea of the severe labour and the horrible sufferings of that unfortunate class of beings. There will be but few, if, indeed, there can be any, who, after having perused the preceding details of this revolting subject, will not partake of the feelings which have been present to our own minds, while wading through the pages of the Appendix to the Commissioners' Report. The dreadful sufferings to which even infants are subjected in most of the mining districts, in prosecuting their premature and destructive labour; the disgusting indecencies daily passing before their eyes, and inviting their imitation; and the licentious habits and social disorganization springing out of these things, are of so startling a nature as to excite the most lively apprehensions as to their consequences upon society, if permitted to continue in an unmitigated form.

We are not insensible to the difficulties and hazards of legislative interference in affairs of this description; nor do we think that anything short of extreme necessity will justify such interference. It has been exercised in some such cases, however, and this is one to be added to the number. It is not to be permitted in a country ranking high in the scale of civilization, and taking an active and leading part in the civilization and Christianization of foreign lands, that any set of men, however useful to the community at large may be the result of their pursuits, should carry on those pursuits at the cost of such a fearful amount of suffering and demoralization as that existing in the colliery districts of the United Kingdom. It may be, and we fear is, the fact, that the employment of young children is indispensable to the working of some of the coal mines, in which the seam of coal is narrow; but surely the employment of young children may be placed under such regulations as to save them from much of their present suffering and contamination; whilst the general management of some of the mines may be so improved as to decrease largely the number of serious and fatal accidents now constantly occurring.

We are borne out in this opinion by many passages occurring in the evidence, and in the reports of the sub-commissioners, and from these we shall now make such a selection as may be likely to induce a desire in the public mind to press the subject on the attention of the legislature.

1. The first thing obviously calling for attention is the early age at which children are introduced into the mines to work. Multitudes of children are condemned to the gloomy and hebelitating occupation of the pit when little more than five years old; and some cases have been brought to light where, at the age of four, they have been carried down into these receptacles of misery. Many of the witnesses state, that in some districts "they are carried down as soon as they can crawl about!"

This is a matter which cannot fail to obtain the interference of the legislature, as that interference has been exercised in the case of the factory children.

To exemplify the interest with which this subject is regarded by those to whose intimate acquaintance with the social habits of the colliers generally importance is to be attached, Mr. Franks gives the following extract from a letter received from Mr. James Wright, a gentleman of great practical knowledge of the subject, and the manager of his Grace the Duke of Buccleuch's collieries:—

"I cannot conclude this letter [says the writer] without expressing my most anxious wish that the Report of the Commissioners may have the effect of directing the attention of the legislature to this most important subject. I would be against the interference of the legislature in any case except where it is absolutely necessary; but here I conceive it is their imperative duty. If a measure were passed, enacting that no females were to be employed in our pits at all, no boys allowed to go down under twelve years of age, and only then if they can both read and write, in all cases the work limited each day to ten hours—if such a measure were to pass I do not know a greater boon that could be conferred, not only upon the mining population, but upon the proprietors of Scotland." (App., Pt. I., p. 497.)

Many other persons familiar with the state of things in the mining districts, agree with this gentleman in opinion. The Rev. J. C. Galloway, M.A., of West Bromwich, says—

"I cannot express the gratification which the appointment of the Children's Employment Commission gives me. It is a measure greatly needed. Too early employment and its necessary attendant of the neglect of all intellectual and moral culture, are producing the most distressing and alarming results. The general welfare—not merely of the children themselves, but of the whole community—demands the decided interference of the legislature. I believe that it is in most cases poverty that induces parents to send their children to work so soon; but if manufacturers, &c., were forbidden by law to employ children under a certain age, they would be constrained to offer to the adult higher wages, and thus the parents would be entitled, as I doubt not they are inclined, to send their unemployed children to school." (Ibid., p. 27.)

Mr. Kennedy, speaking of the Lancashire district, says—

"An extensive body of facts are now before the Board with respect to the ages of the children. On this subject I have only to observe, that in this district it appears to me there is an extensive and growing feeling against the employment of very young children which will support any regulations which the legislature may impose."

We have given, in the preceding pages, ample proof of the want of intellectual and moral culture in the young mining population. The exclusion of very young children from the pits is indispensable to improvement in this respect. Many competent witnesses agree in this.

Rev. S. Webb, and Rev. W. J. Skidmore, Wolverhampton, say—

"Education, in the intervals of labour, is not likely to be very beneficial; nor will the mental or physical condition of the children be much improved until their earlier days are entirely devoted to instruction." (App., Pt. I., p. 27.)

We have not space to multiply extracts upon this topic; nor is it necessary. It is one the merits of which will be immediately obvious to every mind.

2. The next thing calling for legislative regulation, is the employment of females in mines—a practice which is fruitful in evil, both to the individuals themselves, and to all with whom they are connected. We have already seen what the effect is upon their own moral feelings and conduct; and it will not be difficult to conceive of their characters as wives and mothers.

Mr. Thomas Asworth, the able agent of Lord Vernon, agrees with multitudes of other witnesses who have become familiar with the moral condition of the colliers and their families, and says, "No female ought to be employed under ground, as it is a degradation to the sex." (App., Pt. II., p. 191.)

"In the case of the female children," says Mr. Franks, (App., Pt. I., p. 399,) "the effect of their ignorance and want of instruction in needlework, knitting, &c., strikes one as the more remarkable, since, happily, these useful arts are almost universally to be found possessed by the female population throughout the land; but when we reflect upon the low state of domestic life into which the collier family is, as it were, driven by the nature and duration of their employment, and of the indifference which this unmitigated slavery begets in the mind—even of the young—to all those wholesome incitements to cleanliness and decent proprieties of person and home, which are invaluable as the means of keeping the

tone of a labouring population from sinking into grossness, it excites but little wonder; nor is it surprising that tradesmen scarcely ever marry colliers' daughters where the females work below ground, as they know nothing of housewifery. How in the name of reason should they? Are they to learn it in the pit?"

In the Dalkeith collieries of the Duke of Buccleuch, women and girls have been excluded from the mines, by express order of his Grace. Let us examine the effect of this regulation, anticipated by Mr. James Wright, the manager:—

"I feel confident that the exclusion of females will advantage the colliers in a physical point of view, and that it will force the alteration of the economy of the mines. Owners will be compelled to alter their system; they will ventilate better, make better roads, and so change the system as to enable men who now work only three or four days a-week to discover their own interest in regularly employing themselves. Since young children and females have been excluded from his Grace's mines, we have never had occasion to increase the price of coal." (*Ibid.*, p. 399.)

Let us take now the evidence of Mr. John Wright, manager of the Rosewell and Barleydean Coal-mines, the property of J. B. W. Ramsay, Esq., from which, for the last four years, women and very young children have been excluded. This gentleman says—

"Men labour here on the average from eleven to twelve days in the fortnight; whereas when they depended on their wives and children, they rarely wrought nine days in the same period. Colliers are now stationary, with very few exceptions, and the women themselves are opposed to moving, since they have felt the benefit of homes." (*Ibid.*, p. 400.)

3. Another thing calling for regulation is the daily term of labour, which extends in some districts, as we have seen, to between sixteen and eighteen hours a day; a space of time by far too protracted for continuous labour under any circumstances, but more especially so, in such places as coal and metal mines.

Objections, of various kinds, have been made to any compulsory shortening of the hours of labour in the collieries, which are said to be irremediable. But they are no such thing.

"Any restriction as to hours which should be *universally obligatory*, and which should be rigidly and impartially enforced by law," says Mr. Symons, "would not only reduce the hours of work, but by limiting the present redundant supply, raise wholesale prices to a legitimate amount, and avert injury to the coal-masters, although it might diminish the exorbitant profits of coal-dealers, for whose exclusive benefit it appears that these long hours are maintained. But this cannot be done by any other than legislative regulation."

And this view of the matter is supported by several independent and experienced persons.

William Bedford, one of the proprietors of Gildersome, Morley, and Drighlington Collieries, examined May 14, 1841, at Drighlington:

"If pits were allowed to draw nine hours, it would be plenty. In our pit we have sixty people: we begin letting them down at six, and we begin drawing at seven or soon after, and we stand three-quarters of an hour at noon; and are all out in a general way at half-past four. We keep drawing coals and people just as they come during the last two or three hours. It is a bad place to allow children to stay in the pits to work after the men have left. The lads do nothing but play, and are in far too long. It might be prevented. If the Government wishes to regulate the hours pits work, I believe they can do it no other way than by regulating the hours coals are drawn by the engine; and nine hours ought to be allowed for pulling coals exclusive of meal-time, and pulling the men. Taking one with another, if this were done, no man or boy will remain in the pit longer than nine hours. Relays of boys would be very awkward. Many pits are drawn by horses, and they could not manage it all." (*App.*, Part I, p. 286.)

It is unavoidable that some degree of inequality of labour should occasionally take place in the working of coal-pits; but it would be perfectly easy to take care that at no period should the duration of labour exceed what is due to a regard for the health and strength of the young persons employed in this most laborious occupation. It has been repeatedly stated, that eight hours

has been usually esteemed the proper length of a collier's day's work ; and the evidence is universal, that more than nine is incompatible with health or strength in the long run. "Nine hours is plenty for a collier or a child to work," said Mr. Haigh, agent to the Messrs. Charlesworth, "and I will state this anywhere." (*Ibid.*, p. 169.)

4. The prevention of accidents in the pits is a point of great importance. Many of them occur, as we have seen, from sheer inattention on the part of the proprietors to the obligations and responsibilities devolving upon them.

Dr. Mitchell has enumerated several things, under this head, deserving of attention. He says—

"Since I have explored other districts, I have formed a decided opinion that the accidents in Staffordshire might be diminished by the following means:—

"(1.) A more powerful system of ventilation, which would more completely clear off the carburetted-hydrogen gas, and the carbonic-acid gas, and would also improve the health by carrying off the foul air occasioned by the breathing of men and horses, and animal effluvia.

"(2.) By stronger and more complete tackling for ascending and descending, and by a protection of a canopy or iron umbrella over the heads of the people.

"(3.) By a rigorous discipline as to the number of men, or of boys, allowed to go up or down at a time.

"(4.) By being careful to select a steady man to work the engine, and being strict to enforce attention to his duty.

"(5.) By more effectually shutting up old pits; and also by erecting some sort of enclosure round the pits at work, so as to put persons on their guard who approach them.

"(6.) By an examination of the state of the pits every morning before the men went down to work. Also, [by an examination of the condition of the whole tackling and gear by which they descend." (*Ibid.*, p. 17.)

The preceding pages bear ample testimony to numerous accidents arising from want of attention to these subjects. We might add much to what has been there incidentally stated.

In the case of the accidents from falling down shafts of coal-pits, and of iron-stone pits, the proprietors or lessees are greatly to blame. We find some falling down the shafts of old pits, and are crushed to death, or drowned in the water at the bottom. One playful boy, of nine years of age, is flying a kite in an old coal-pit field, and falls to the bottom, and is killed. All these accidents might be prevented by enclosing the mouths of the pits with durable material. When wood is employed it is liable to be carried off, and at all events it soon rots away. It is not uncommon to see a remnant of a brick fence, but very frequently quite inadequate for its purpose. A strong turf fence would answer as well, and would not afford any temptation for people to carry it piecemeal away. In regard to the top of the shafts of pits which are actually at work, they must be left sufficiently clear of all incumbrance which would impede labour; but even these might be partially enclosed, and at all events, by such a barrier as would not allow persons to approach without being reminded of their danger. A stranger coming into a coal-field is on his guard, but persons always at work in the field are apt to become less cautious. Such was probably the case with a bankswoman, aged 17, in the parish of Willenhall, and the bankswoman, aged 19, in the parish of Bilston, who both perished by falling into iron-stone pits.

No child should be permitted to manage an engine; whereas many

children are now entrusted with this responsible employment. We have already mentioned fatal accidents arising from this cause: we have many more before us.

John Halliwell, the active overseer of Oldham, mentioned several instances of this, in cases which had come under his notice:

"I remember a case, two years ago, where a boy of ten years of age was managing an engine, whilst five men were coming up, and he let the engine wind them over the head-gear, and they were all killed. I was foreman of the coroner's jury at the time, and we represented the danger of entrusting the care of engines to such young children to one of the masters who attended the inquest; but he said the engines were just as safe in the hands of children as full-grown men.

"Is it still usual to give the charge of the engines to children?—Yes; I believe it is still common to employ children as engineers." (App. I., Pt. I., p. 171.)

5. The drawing with the girdle and chain, as described in the third chapter of this pamphlet, should be put an end to.

Mr. William Lloyd, an old miner, who was sent to Dr. Mitchell to the inn at the Iron Bridge, with specimens of coal and iron-stone, on being asked his opinion of the girdle, replied, "Sir, I can only say of it what the mothers say—It is barbarity! barbarity!"

All the the great companies have made an advance in civilization, and have substituted the railroad and the dan for the girdle and chain; but there are still some persons, generally of small capital, who lease a small pit, and instead of a steam-engine, use a horse and a gin, and instead of laying down a small railway in their pits, employ boys to drag with the girdle and chain. The legislature has prohibited, under severe penalties, the drawing of carts by dogs, and cannot therefore allow the more inhuman practice of drawing of carts by boys.

The examination of the children shews there is much more of drawing with girdle and chain than what, from the evidence of the managers of the large companies, we should have supposed. A perusal of the evidence given in the preceding pages will amply shew the severe pain which this manner of working inflicts. That the work can never be accomplished without suffering, there is too much reason to fear, but no means should be spared to render it the least possible. (App., Pt. I., p. 35.)

We have now adverted to the principal topics that suggest themselves for legislative inquiry and regulation. There are others which will suggest themselves as the evidence is perused; and we trust that every friend of humanity will feel himself, or herself, as the case may be, called upon to use his or her influence on behalf of the oppressed and suffering colliery children.

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